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WEIGHTS
MEASURES AND MONEY
OF ALL NATIONS.

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WEIGHTS,

MEASURES, AND MONEY,

OF ALL NATIONS.

COMPILED BY

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INTRODUCTION.

In the following pages the compiler has sought to arrange, in a manner convenient for reference, the weights, measures, and money, of all nations. The work is naturally divided into two parts: first, a classification according to countries, arranged alphabetically; and, second, a set of tables in which the value of each unit is given both in English and in metric standards. This use of the metric system, coextensively with the ordinary system, may be regarded as the characteristic feature of the book. Of course, its introduction on so broad a scale doubled the labor of constructing many of the tables in the work, but the writer believes the labor to have been profitably spent. The metric weights and measures are now legal in this country, and are used by at least twenty nations besides; surely, then, they deserve as much attention as our own more locally familiar but more bungling systems. Our three sets of weights, our three different gallons, and our

two dissimilar bushels, all unrelated to each other, or to the units of length, must soon give way before the simplicity and elegance of the metric system. That this event may soon happen, and that the weights and measures of the world may before long be reduced to metric uniformity, is the sincere wish and hope of the writer.

F. W. C.

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WEIGHTS, MEASURES, AND MONEY.

PART FIRST.

THE tables given in this part of the work need no explanation save in one particular. In the tables which relate to coinage the weight is expressed in troy grains, and the fineness in thousandths. Thus a gold coin is 900 fine when it contains in 1,000 parts 900 of pure or "fine" metal. It will be noticed in many cases that the absolute metal value of a coin varies from its assumed theoretical worth. Variations of this sort are, however, generally trifling, although obviously unavoidable altogether.

Abyssinia.

Length.—The pic = 27 inches, or 0.686 metre.

Liquid Measure.—The kuba, or cuba, = 0.2684 gallon, or 1.0166 litres.

Dry Measure.—For grain, the chief measure is the ardeb; which at Gondar in the interior is divided into 10 madegas, and at Massowah on the sea-coast into 24 madegas. At Gondar, the ardeb equals 0.11465 bushel, or 4.039 litres; at Massowah it is 0.33333 bushel, or 11.745 litres.

Weight.—10 dirhems make 1 wakea.

12 wakeas " 1 rotl, rottolo, or liter, = 4,800 grains.

32 rotl " 1 mond, or maund.

12 dirhems " 1 mocha, = 1 troy ounce.

For coinage, Abyssinia depends upon foreign countries. Venetian sequins, Spanish dollars, and the "Maria Theresa dollars," of Austria, are chiefly in circulation. The last-named coins are also called patakas, or patacks.

23 harfs = 1 pataka.
$2\frac{1}{4}$ patakas = 1 sequin.

Large payments are made in gold ingots, weighed by the wakea. A wakea of gold commonly rates at a little less than 12 patakas, but of course the value fluctuates. In some localities small bricks of salt, and strings of beads, serve as currency.

Achin, or **Acheen.** *See* SUMATRA.

Afghanistan.

The money, weights, and measures of Afghanistan are like those of Persia, Arabia, and India.

In length, 1 goess = 45.67 inches, or 1.16 metres.

Algeria.

Since the French conquest, the French coinage, weights, and measures, have been used. The earlier, native values were about as follows:

Length.—The Turkish pic = 24.92 inches, or 0.633 metre.
" Arabic " = 18.96 " " 0.482 "

Each pic is divided into eight parts, called *robi.*

Liquid Measure.—The khoullé = 4.4027 gallons, or 16.66 litres.

Dry Measure.—The tarrie = 0.56295, the saâ = 1.36215, and the caffiso = 9.00718 bushels.

Weights.—The karob = 3 grains. The mitkal or metical = 72.06 grains, used in weighing gold, etc. The wakea = 12.04 oz. The rotl attari, for spices, = 1.20396 lb.; the rotl feuddi, for gold and silver, = 1.096714 lb.; the rotl gheddari, for fruits, = 1.354458 lb.; and the rotl khebir, = 2.03167 lbs., or a little less than one kilogramme. There are also corresponding quontars, or cantaros, equal respectively to 100 of each rotl.

Money.—The former silver rial-boudjou was equal to $0.3617. The pataca chica, money of account, was worth about $0.223.

Amboyna. *See* MOLUCCAS.

Annam.

Length.—Here there are two systems; the first used for cloth measure, the second employed by architects and builders. 10 ly = 1 phan; 10 phan = 1 tac; 10 tac = 1 thuoc; 10 thuoc = 1 truong; 3 truong = 1 that; 10 that = 1 gon. In this system the phan = 0.2558 inches. In the architect's scale the phan = 0.1918 inches, and is subdivided as in cloth measure. Above the thuoc, 5 thuoc = 1 ngu; 3 ngu = 1 sao; 10 sao = 1 mau.

Road Measure.—2 ly = 1 dam, of about 0.55 mile.

Surface.—Squares of builder's long measure are used in measuring land.

Capacity.—No authentic system.

Weight.—The ly, = 0.6 grain, is decimally subdivided down to its millionth part. Of course these minor weights are imaginary. Above the ly, 10 ly = 1 phan; 10 phan = 1 dong; 10 dong = 1 luong; 10 luong = 1 nen; 1.6 nen = 1 cân. The cân = 1.378 lbs., or 624.838 grammes. 10 cân = 1 yen; 5 yen = 1 binh; 2 binh = 1 ta; 5 ta = 1 quăn. The quăn = 688.76 lbs.

Money.—60 sapeks = 1 mas; 10 mas = 1 kwan. The kwan equals $0.6698.

Antigua. *See* WEST INDIES.

Arabia.—MOCHA; *See* also MUSCAT.

Length.—The guz, gez, or goess = 25 inches, or 0.63498 metre. The cobido or covid = 19.0 inches, or 0.4826 metre. The kassaba = 4.1 yards, or 3.75 metres.

Road Measure.—The baryd, of 4 farsakh = about 12 miles.

Liquid Measure.—16 vakias = 1 noosfia or nusfiah; 8 noosfias = 1 gudda or cuddy; = 1.999 gallon, or 7.567 litres.

Dry Measure.—40 mecmedas or kellas = 1 teman or tomand; 1 teman of rice weighs 168 lbs. avoirdupois.

Weights.—40 vakias = 1 maund or maon, = 3 lbs., or 1.3608 kilogrammes. 10 maunds = 1 frazil, = 30 lbs., or 13.61 kilo-

grammes. 15 frazils = 1 bahar, = 450 lbs., or 204.12 kilogrammes. At Bet-el-faki the maund is equivalent to 2.039 lbs., and at Jidda to 1.830078 lbs. In the former place the bahar contains 400 maunds, and at the latter only 100. These towns also have a rotl, equal at Bet-el-faki to 1.019531 lbs., and at Jidda to 0.366016 lb.

At Mocha the wakega, used in commerce, = 1 lb. avoirdupois; the wakega for gold and silver being only 0.68571 lb. Minor weights are the danik, 7.86 grains troy; the coffala, used in weighing gold and silver, 48 grains; and the miscal, 72 grains.

Money.—Accounts are kept in piastres of 80 caveers; the value of the piastre being about $0.8337. Another authority makes it 90 cents. Payments may be made also in Spanish dollars. The commassee is a small native coin containing 7 carats silver, and worth about 40 to the dollar.

Argentine Confederation.

The metric system of weights and measures has recently been introduced, and is now the only system recognized in the custom-houses of the republic. The former weights and measures were as follows, being of Spanish origin:

Length.—4 palmas = 1 vara; 2 varas = 1 braza. Also, 3 pies = 1 vara. The vara = 34.1208 inches, or 0.866 metre.

Road Measure.—The legua = 600 varas, or 0.3231 mile. The milla = 1.149 miles, or 1.85 kilometres. Used upon railroads.

Liquid Measure.—32 frascos = 1 baril. The frasco = 0.6274 gallon, or 0.2374 litre.

Dry Measure.—The lastre = 2 toneladas, or 15 fanegas. The fanega = 3.8936 bushels, or 137.195 litres.

Weight.—25 libras = 1 arroba; 4 arrobas = 1 quintal; 20 quintals = 1 tonelada. The libra = 1.0127 lb., or 0.45936 kilogramme. The arroba of Buenos Ayres = 25 Castilian libra, or 25.3583 lbs. The marco, for gold and silver, = 3544.4 grains.

Money.—8 reales = 1 peso fuerte; 16 pesos = 1 onza. The United States value of the peso fuerte (Secretary of the Treasury, 1874) is exactly $1.00. The gold onza, of 1813 to 1832, according

to the United States assay, = $15.5146. That from 1828 to 1832, $14.6579.

Australia.

Generally the same as Great Britain. The value of certain gold coins is given as follows by the Director of the United States mint: Pound of 1852, weight .281 ounce, 916½ fine, value $5.324. Of 1855, weight .256 ounce, 916½ fine, value $4.8501. Sovereign of 1855 to 1860, weight .2565 ounce, 916 fine, value $4.857.

Austrian Empire.

After January 1, 1876, the metric system will be the legal one. *See* also, BOHEMIA, HUNGARY, and POLAND.

Length.—12 punkte make 1 linie.
12 linien " 1 zoll.
12 zoll " 1 fuss = 1.03713 feet, or 0.31611 metre.
6 fuss " 1 klafter.
The elle = 2.465 fuss, = 30.676 English inches.
The ruthe = 12 fuss, = 12.44556 English feet.

Engineers and surveyors use a system derived from the ruthe, in which $\frac{1}{10}$ ruthe = 1 decimal fuss, $\frac{1}{100}$ ruthe = 1 decimal zoll, and $\frac{1}{1000}$ ruthe = 1 decimal linie.

Road Measure.—4,000 klafter, or 24,000 fuss = 1 meile. The meile = 4.714227 miles, or 7.5866 kilometres.

Surface.—Commonly, squares of the measures of length. In measuring land, the joch (which is divided into three metzen), = 1,600 square klafter, or 57,600 square fuss. The joch = 1.4223 acres, or 57.55 ares.

Liquid Measure.
2 pfiff make 1 seidel.
2 seidel " 1 kanne or halbe mass.
2 kannen " 1 mass, = 1.49525 quarts, or 1.4149 litres.
10 mass make 1 viertel.
4 viertel " 1 eimer, = 14.9525 gallons, or 56.5997 litres.
32 eimer make 1 dreiling.
32 eimer " 1 fuder.

Dry Measure.—For coke and coal the stübich, = 2 metzen, is used; for lime, the kalkmütkel, = 2½ metzen; for wood, the cord of ½ cubic klafter. Ordinary dry measure is as follows:

2 becher	make	1	kleines massel.
2 kleine massel	"	1	grosses massel.
2 grosse massel	"	1	müller-massel.
2 müller massel	"	1	achtel.
2 achtel	"	1	viertel.
4 viertel	"	1	metze, = 1.74512 bushels, or 61.49 litres.
30 metzen	"	1	muth.

Weight.—1st. *Ordinary Commercial:*

4 pfennige	make	1	quentchen.
4 quentchen	"	1	loth.
2 loth	"	1	unze.
4 unzen	"	1	vierding or vierling.
2 vierding	"	1	mark, = 0.6173 pound, or 280.0 grammes.
2 mark	make	1	pfund, = 1.2346 pounds, or 560.0 grammes.
20 pfund	make	1	stein.
5 stein	"	1	centner, = 123.4615 lbs.
4 centner	"	1	karch.
20 centner	"	1	schiffslast (shipping ton).
40 centner	"	1	last (ordinary).

The saum = 275 pfund.

The saum (of 2 lägel) for Styrian steel = 250 pfund.

The zollpfund of the Zollverein, for customs, = 500 grammes.

The münzpfund also = 500 grammes.

2d. *Weights for Precious Metals:*

4 pfennig	make	1	quentchen.
4 quentchen	"	1	loth.
16 loth	"	1	mark, = 4,333 grains, or 280.0 grammes.

The karat for jewels = 3.1799 grains, or 0.206085 gramme.

3d. *Apothecaries' Weight*, in which the pfund is 1½ mark.

20 gran	make	1	scrupel.
3 scrupel	"	1	drachme.
8 drachmen	"	1	unze.
12 unzen	"	1	pfund = 6,499 grains troy.

Money.—Formerly, 4 pfennige made 1 kreutzer; 60 kreutzer 1 florin or gulden; 2 gulden 1 thaler. The ducat was 4½ gulden. 20 gulden were coined from the Cologne mark of fine silver, each one being worth $0.5054.

The new florin or gulden of 100 kreutzer is equal to $\frac{1}{45}$ of a münzpfund (500 grammes) of fine silver. The vereinsthaler of $\frac{1}{30}$ münzpfund is 1½ florins. This florin is worth $0.4803, and rates in the United States custom-houses at $0.4760.

The following table gives the chief coins, their value, weight in troy grains, and fineness in thousandths:

COINS.	Material.	Weight.	Fineness.	Value.
Former four-ducat piece. Legal	Gold.	.....	.....	$9.1502
" " " By U. S. mint assay	"	215.04	986	9.1320
Souverain or sovrano. No longer coined	"	.....	900	6.7783
" " " By U. S. mint assay	"	174.24	900	6.7540
Vereinskrone	"	171.27	900	6.6462
Halbe vereinskrone	"	85.64	900	3.3231
Ducat. Before 1865	"	.....	986	2.2871
Four-florin piece. By U. S. mint assay	"	49.92	900	1.9350
Hungarian ducat	"	.....	.....	2.2946
Old scudo. By U. S. mint assay	Silver.	401.28	902	1.0260
Former Conventions or specie-thaler. Before 1857	"	.....	.....	1.0109
Former Conventions or specie-thaler. By U. S. mint assay	"	432.96	833	1.0230
Maria-Theresa-thaler. Still coined with date 1780	"	.....	.....	1.0109
Maria-Theresa-thaler. By U. S. mint assay	"	429.60	838	1.0210
Vereinsthaler	"	.....	.....	0.7204
" " By U. S. mint assay	"	286.08	900	0.7310
Three-gulden piece	"	570.91	900	1.4409
Two " "	"	380.61	900	0.9606
Gulden before 1858 (Conventions-florin)	"	.....	.....	0.5054
" " " Rate in U. S. customs	"	.....	.....	0.4850
" " " U. S. mint assay	"	216.48	833	0.5110
New gulden or florin	"	.....	.....	0.4803
" " " U. S. mint assay	"	190.56	900	0.4860
Quarter-gulden. Weight 5 grammes	Billon.	77.15	520	0.1201
10 kreutzer. " 2 "	"	30.86	500	0.0480
5 " " 1 "	"	15.43	375	0.0240
4 "	Bronze.	201.59	.....	0.0192
Kreutzer	"	50.39	.....	0.0048
Half-kreutzer	"	25.20	.....	0.0024

Azores Islands. Generally like PORTUGAL.

Dry Measure.—2 quartos = 1 meio; 2 meios = 1 alquiere;

4 alquieres = 1 fanga, of 1.35959 United States bushels, or 47.907 litres.

Money.—The milreis, in U. S. custom-houses, rates at $0.835.

Baden. *See* also GERMAN EMPIRE.

Length.—The ruthe, = 3 metres, is divided decimally into 10 fuss, 100 zoll, 1,000 linien, and 10,000 punkte. The elle = 6 decimetres. In United States measure the fuss = 11.811 inches. The klafter = 3 ellen.

Road Measure.—The wegstunde (½ meile) = 14814.8148 fuss. The meile = 5.5234 English miles.

Surface.—100 square ruthen = 1 viertel; 4 viertel = 1 morgen. The morgen = 36 ares, or 0.8897 acre.

Liquid Measure.—The fuder is divided decimally into 10 ohm, 100 stützen, 1,000 mass, and 10,000 glas. The value of the mass is 1.5 litres, or 1.585 quarts.

Dry Measure.—The malter (of 150 litres) is divided decimally into 10 sester, 100 mässlein, and 1,000 becher. 10 malter = 1 zuber. In United States measure the malter = 4.257 bushels.

Weight.—1 centner = 10 stein = 100 pfund = 1,000 zehnling, = 10,000 centass = 100,000 dekass or pfennig = 1,000,000 ass. The pfund, which is the same as the zollpfund or münzpfund of Germany in general, = 500 grammes, or 1.1023 lbs.

For *apothecary's weight, see* GERMAN EMPIRE.

Money.—The table gives the more important coins of Baden, their material, fineness, and value in United States dollars:

COINS.	Material.	Fineness.	Value.
Former Ludwig d'or	Gold.	.....	$3.4388
" doppelthaler (3½ gulden). Before 1857.	Silver.	.....	1.4409
" 2 guldenstück " "	"	.....	0.8252
" gulden of 60 kreutzer " "	"	.....	0.4126
" " " " in U. S. custom-houses	"	.....	0.4000
Vereinsthaler (1½ gulden)	"	900	0.7204
Gulden (60 kreutzer)	"	900	0.4117
½ guldenstück	"	900	0.2054
3 kreutzerstück	Billon.	.....	0.0206
Kreutzer	Bronze.	.....	0.00686
½ kreutzer	"	.....	0.00343

Bahamas. *See* WEST INDIES.

Balearic Islands. *See* SPAIN.

On these islands there are various local measures and weights. Even the more general standards, as the libra, the cantaro, palma, etc., have, however, different values on the different islands of the group, the discrepancies being sometimes very great. Peculiar to Minorca is the gerrah = 3.18599 gallons. Majorca has the quartés, 1.10274, the quartin, 7.16781 gallons; and the oder of 100.2178 lbs. For length, the palmo = 7.697 inches. For weight, the libra = 0.882 lb.

Bantam. *See* JAVA.

Barbadoes. *See* WEST INDIES.

Barbary States. *See* ALGERIA, TRIPOLI, and TUNIS.

Barbuda. *See* WEST INDIES.

Batavia. *See* JAVA.

Bavaria. *See* also GERMAN EMPIRE.

Length.—12 linien make 1 zoll.
12 zoll " 1 fuss, = 11.49 in., or 0.29184 metre.
6 fuss " 1 klafter.
10 " " 1 ruthe.

The elle = 34.25 zoll. By engineers and surveyors the fuss is decimally divided. Local values of the fuss and of the elle are known at Augsburg and Nuremberg.

Road Measure.—The meile = $\frac{1}{15}$ of an equatorial degree, = 4.6143 miles. The Anspach meile = 5.3652 miles.

Surface.—The juchart, morgen, or tagewerk = 40,000 square fuss, and is decimally divided. It equals 34.0536 ares, or 0.8416 acre.

Liquid Measure.—64 mass make 1 eimer. For wine, the eimer = 16.9444 gallons; for beer, 18.07505 gallons. The müdde of Augsburg, an old measure, = 14.92156 gallons; the Nuremberg visirmass = 0.30302 gallon; and the schenkmass of the same

city = 0.28505 gallon. In old times almost every large town seems to have had its own local system.

Dry Measure.—2 dreissiger make 1 mässlein.
2 mässlein " 1 massel or achtel.
4 massel " 1 viertel.
2 viertel " 1 metze.
6 metzen " 1 scheffel, = 6.31002 bushels, or 222.34 litres.

For wood, the klafter is used, = 126 kubik fuss, or 3.1325 cubic metres, or 110.6305 cubic feet.

Weights.— 4 quentchen make 1 loth.
4 loth " 1 halber vierling.
2 halbe vierling " 1 vierling.
4 vierling " 1 pfund.

This is the pfund of the Zollverein, of 500 grammes, or 1.102364 lbs. avoirdupois. The commercial pfund = 560 grammes, is divided into 16 unzen, 32 loth, and 128 quentchen, and is equal to 1.2346 lbs. avoirdupois. For apothecary's weight, the old apothecary's pfund of Nuremberg, with its subdivisions, is used throughout Germany. *See* GERMAN EMPIRE.

Money.—4 pfennige = 1 kreuzer; 60 kreuzer = 1 florin or gulden; 16 gulden = 1 krone. The table gives the more important coins, their material, weight in troy grains, fineness in thousandths, and value in United States dollars:

COINS.	Material.	Weight.	Fineness.	Value.
Krone	Gold.	171.444	900	$6.5872
Halbe Krone	"	85.722	900	3.2936
Former Carolin	"	.....	.....	4.9920
" Max d'or	"	.....	.....	3.3414
" Ducat	"	.....	.....	2.2876
Vereins - Zweithalerstück (2 - Thaler piece)	Silver.	571.481	900	1.4409
Vereinsthaler	"	285.742	900	.7204
Zweiguldenstück (2-gulden piece)	"	326.561	900	.8234
Gulden, or florin	"	163.282	900	.4117
½-Gulden	"	81.641	900	.2058
Viertelgulden	"	70.650	520	.1029
6-Kreuzerstück	Billon.	38.005	.....	.0412
3 "	"	19.002	.....	.0206
Kreuzer	"	12.988	.....	.0069
Zweipfennigstück (⅓ kreuzer)	Bronze.	38.575	.....	.0034
Pfennig	"	19.282	.....	.0017
Heller	"	102.224	.....	.....

Belgium.

The weights and measures are the metric weights and measures of France. Sometimes different names are used, as aune for metre, litron for litre, livre for kilogramme.

Money.—The lawful currency is in francs and centimes, precisely as in France. The value of the franc, as a money of account, is in the United States $0.193. The franc formerly rated at $0.186.

COINS.	Material.	Weight.	Fineness.	Value.
25 franc piece	Gold.	121.92	899	$4.7200
5 "	Silver.	385.84	897	.9800
2 "	"	153.60	835	.3640

Beloochistan. Like AFGHANISTAN.

Bengal. *See* INDIA.

Bermudas. *See* WEST INDIES.

Birmah. (RANGOON.)

Length.—The palgat or paulgaut = 1 inch, or 0.0254 metre; 18 paulgauts = 1 taim or cubit; 22 paulgauts = 1 saundaung or royal cubit.

Road Measure.—7 saundaungs = 1 dha or bambou; 1,000 bambous = 1 dain or taing. The taing = 2.4306 miles, or 3.9116 kilometres.

Weight.—100 ticals or 3 catties = 1 vis; 150 vis = 1 candy. The candy = 500 lbs., or 226.801 kilogrammes.

Bohemia. (PRAGUE.) *See* also AUSTRIA.

Length.—The Prague fuss = 11.88 inches, and the elle 23.2 inches.

Surface.—2 strich = 1 Austrian joch.

Liquid Measure.—4 seidel = 1 pinte; 32 pinten = 1 eimer; 4 eimer = 1 fass. The fass = 64.5598 gallons.

Dry Measure.—12 seidel = 1 massel; 4 massel = 1 viertel; 4 viertel = 1 strich. The strich = 2.65618 bushels.

Weight.—20 pfund = 1 stein; 6 stein = 1 centner. The pfund is subdivided as in Vienna, but is a trifle lighter than the Imperial standard.

These are only local weights and measures. The legal system is, of course, that of Austria.

Bokhara. *See* TURKESTAN.

Bolivia.

The metric system is recognized at the custom-houses. The other weights and measures are of Spanish origin.

Weights.—4 arrobas = 1 quintal. The quintal = 46 kilogrammes, or 101.4179 lbs.

Money.—10 cents = 1 real; 10 reals = 1 peso. The peso is rated in the United States (Secretary of the Treasury, 1874) at $0.9651. Its theoretical value is about $1.03.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Onza or doubloon (1827–1836). Legal rate	Gold.	.....	.....	$15.6018
Onza or doubloon (1827–1836). By U. S. mint assay	"	416.16	870	15.598
Peso. Former. By U. S. mint assay	Silver.	308.64	903½	0.791
½ peso " " " "	"	207.36	667	0.392
New peso " " " "	"	384.48	900	0.961

Borneo.

The island contains English and Dutch settlements, in which the corresponding weights and measures are known.

Dry Measure.—The gantang = 0.73782 bushel.

Weight.—The pecul = 135.6354 lbs. Minor weights seem to be something as follows:

3 malabarong = 1 tica; 1½ tica = 1 copang; 4 copang = 1 mace; 4 mace = 1 pahaw; 4 pahaws = 1 tael. The tael = about 614 troy grains, or 39.828 grammes.

Bourbon, Isle of.

French colony, using French weights and measures.

Brazil.

The metric system is now the legal system of weights and measures. The former scales were essentially Portuguese, with variations, these being different in different parts of the empire. The alquiere = 1.13512 bushels; the vara = 1.18878 yards; the arroba (of 32 arratels) = 32.3792 lbs.; the quilate, a weight for gems, = 3.075 grains; and the outava, for topazes, = 57.17 grains.

Money.—The milreis, as a money of account (Secretary of the Treasury, 1874), is rated in the United States at $0.5456.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
20 Milreis. Legal rate	Gold.	.....	.....	$10.9235
" " By U. S. mint assay	"	276.00	917¾	10.906
10 "	"	138.30	916	5.4617
5 "	"	69.15	916	2.7309
Former Joao	"	.....	.....	8.7195
2 milreis. Legal rate	Silver.	393.39	916	1.0924
" " By U. S. mint assay	"	393.60	918¾	1.025
Milreis	"	196.64	916	0.5462
500 reis	"	98.32	916	0.2731
200 "	"	39.33	916	0.1092
20 "	Copper.	.....	.....	0.0109
10 "	"	.....	.....	0.0055

Bremen. *See* also GERMAN EMPIRE.

Length.—10 linien = 1 zoll.
12 zoll = 1 fuss, = 11.386 inches, or 0.2892 metre.
2 fuss = 1 elle.
3 ellen = 1 klafter.
8 " = 1 ruthe.

Road Measure.—The meile of 20,000 Rheinfuss = 3.9 miles, or 6.28 kilometres.

Surface.—The morgen = 120 square ruthen = 30,720 square fuss. The morgen = 0.6343 acre.

Solid Measure.—The faden = 72 kubikfuss.

Liquid Measure.—

4 mingel make 1 quartier.
9 quartier " 1 viertel.
5 viertel " 1 anker.
4 anker " 1 ohm, = 38.2965 galls., or 144.964 litres.
6 ohm " 1 fuder.
The stübchen = 4 quartier.
" oxhoft = 6 anker.

Dry Measure.—

4 spinten make 1 viertel.
4 viertel " 1 scheffel, = 2.10195 bushels, or 74.064 litres.
40 scheffel make 1 last.

Weights.—4 ort make 1 quentchen.
4 quentchen " 1 loth.
2 loth " 1 unze.
8 unzen " 1 mark.
2 mark " 1 pfund, = 1.09906 lbs., or 0.498 kilogramme.

The schiffpfund (of 20 liespfund) = 290 pfund. The frachtpfund or pfundschwer = 300 pfund. The centner = 116 pfund.

Money.—5 schwaren=1 grot; 72 groten=1 thaler. The value of this thaler is $0.7476, but it was recognized in the United States, under the law of March 3, 1843, at $0.71. By the law of 1842, the silver rix-thaler, worth $0.7911, was rated at $0.7875. The old gold thaler, of which about $8\frac{1}{6}$ equal the modern vereinskrone, = $0.7912.

Brunswick (BRAUNSCHWEIG). *See* also GERMAN EMPIRE.

Length.—12 zoll = 1 schuh; 2 schuh = 1 elle. The schuh = 11.235 inches, or 0.285 metre. The ruthe = 8 ellen.

Road Measure.—The meile (of 34,424 Rhenish feet) = 6.7136 miles.

Surface.—The morgen = 120 square ruthen, or 30,720 square schuh. English value, 0.6208 acre.

Liquid Measure.—2 nössel = 1 quartier; 4 quartier = 1 stübchen; 40 stübchen = 1 ohm; 6 ohm = 1 fuder. The fuder also = 4 oxhoft. The fass of beer (4 tonnen) = 108 stübchen. The stübchen = 0.988 gallon, or 3.74 litres.

Dry Measure.—4 becher or löcher = 1 vierfass; 4 vierfass = 1 himt; 10 himt = 1 scheffel. The scheffel for wheat = 8.6672 bushels; for oats, 10.40064 bushels. 4 scheffel make 1 wispel.

Weight.—2 heller = 1 pfennig; 4 pfennige = 1 quentchen; 4 quentchen = 1 loth; 16 loth = 1 mark; 2 mark = 1 pfund. The pfund = 1.0306 lbs., or 0.4674 kilogramme. The schiffpfund = 20 liespfund = 280 pfund.

For apothecary's weight *see* GERMAN EMPIRE.

Money.—The former gold pistole, = 5 gold thaler, was worth $3.96. The silver thaler of 24 gute groschen was worth $0.7254. In the United States, by law of 1846, it rated at $0.69.

Buenos Ayres. *See* ARGENTINE CONFEDERATION.

Cambodia. *See* ANNAM.

Canada, including NOVA SCOTIA, NEW BRUNSWICK, NEWFOUNDLAND, PRINCE EDWARD'S ISLAND, and the other BRITISH POSSESSIONS in NORTH AMERICA.

Weights and measures as in GREAT BRITAIN. In Lower Canada, however, one or two old French measures are occasionally met; as the minot, for wheat, = 1.11111 United States bushels; and the arpent, for land, = 0.8449 acre.

Money.—The standard is the dollar of 100 cents, equal in value to that of the United States. The silver 20 and 25 cent pieces are 925 fine, with the following weight and intrinsic value: 20 cent, weight 72.0 grains, value $0.185; 25 cent, weight 90.0 grains, value $0.231. Under United States statutes, prior to act of March 3, 1873, the pound of the British Provinces rated in our custom-houses at $4.00.

Canary Islands.

The measures, weights, and coins, are derived from SPAIN, though somewhat varied. For length, the pié or Castilian foot = 11.126 inches. In weight, the libra = 1.0148 lbs.

Candia. *See* CRETE.

Cape of Good Hope, or Cape Colony.

Weights and measures those of GREAT BRITAIN. The currency is also British, although occasionally the former Dutch values are encountered.

Cape Verde Islands. *See* PORTUGAL.

Celebes.

The pecul = 135.64 lbs. In general, the weights and measures resemble or are indentical with those of the other neighboring islands under the sway of the Netherlands.

Central America. (GUATEMALA, HONDURAS, NICARAGUA, SAN SALVADOR, and COSTA RICA.)

The weights and measures are of old Castilian origin, but varied.

Length.—The vara = 32.874 inches, or 0.835 metre.

Liquid Measure.—The cantara of 4 cuartillas = 4.2631 gallons, or 16.137 litres

Dry Measure.—The fanega of 4 cuartillas = 1.5745 bushels, or 55.48 litres.

Weight.—25 libras = 1 arroba; 4 arrobas = 1 quintal. The libra = 1.043 pounds, or 0.4731 kilogramme.

Money.—The unit is the pezo or dollar of 100 centavos. Its value in the United States (Secretary Treasury, 1874) is $0.9650.

COINAGE TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Onza of 1833, by U. S. mint assay.....	Gold.	.....	.....	$14.9658
Costa Rican half-onza of 1850. U. S. mint assay.....	"	.....	.....	7.6232
2 escudos, or $\frac{1}{2}$ onza. U. S. mint assay.	"	100.32	853$\frac{1}{2}$	3.6875
Pezo, or $\frac{1}{16}$ onza, 1825–1849. U. S. mint assay.....	"	.....	.....	0.8295
4 Reals. U. S. mint assay....	"	12.96	853$\frac{1}{2}$	.4880
Pezo, 1840—1872. " " "	Silver.	.....	.....	1.0311
" 1855 " " "	"	.....	.....	1.0137
" At present " " "	"	415.68	850	.9810

Ceylon.

Generally, British measures of length and surface are used. The covid, when employed, = 18.5 inches.

For liquids, the seer = 1.2 quarts; and the parrah = 6.75 gallons.

In dry measure, the chundoo = nearly half a pint. The amomam = 5.7757 bushels.

The candy, or bahar, for weight, = 500 lbs. Old measure = 520.675 lbs.

The public accounts are kept in sterling money; but, in ordinary commercial transactions, the sicca rupee is the standard. *See* INDIA.

Chili.

The metric system of weights and measures is now legal. Old standards, of Spanish origin, are as follows: The vara = 2.78 feet; the quartillo = 0.2906 gallon; the fanega = 2.575 bushels; the libra = 1.043 lbs.

Money.—The peso or dollar of 100 centavos is the exact equivalent of 5 francs, French currency. Value in United States custom-houses (1874), $0.9123. The gold condor = 10 pesos.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Condor. Piece of 10 pesos.....	Gold.	.....	.....	$9.1225
" By U. S. mint assay.....	"	236.16	893	9.1360
Old peso or dollar. By U. S. mint assay	Silver.	412.72	908	1.0460
New " " " = 5 francs.....	"	.....	.....	0.9648
" " " " By U. S. mint assay.	"	384.48	900½	0.981

China.

Length.—The yan is decimally divided into 10 cheung, 100 chik, 1,000 tsun, 10,000 fan. The official chik, as fixed by the Mathematical Board at Pekin, = 13.125 inches, or almost exactly ⅓ metre. The surveyor's and engineer's chik = 12.7 inches; and the commercial chik of Canton = 14.76 inches, but varies a little.

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Road Measure.—The itinerary chik = 12.17 inches; of these, 1,800 make 1 li, = 1,825.5 feet, or 556.41 metres.

Capacity.—Since in China almost every thing is sold by weight, the wet and dry measures are seemingly superfluous. There are, however, two systems, in which the measures are similarly named, the names being distinguished by the affixes tsong and shi. These series stand to each other in value as 65 to 100; the former being for liquids, the latter for grain. In the liquid, or *tsong* series, the tau is divided into 10 shing and 100 kop. The shing-tsong = 0.1375 gallon. The dry-measure shing (shing-shi) = 0.02177 bushel. Another measure, the sei, = 3.4716 bushels.

Weights.—10 mace = 1 tael; 16 tael = 1 catty or kan; 2 catties = 1 yin; 50 yin = 1 peeul or tam. The catty = 1⅓ lbs., or 604.8 grammes. Hence the peeul = 133⅓ lbs. The shik is a weight of 160 lbs.

Money.—The tael is decimally divided into 10 mace (tseën), 100 candereens (fun), and 1,000 cash (le).

The tael now rates in United States customs at $1.61. Old rate, $1.48. In parts of China some coins from the English mint are used; these are of silver, 901 fine. The dollar of this series weighs 415.68 grains, and is worth (by United States mint assay) $1.04. The corresponding ten-cent piece weighs 41.76 grains, and is worth $0.10¼.

Circassia. *See* RUSSIA.

Cochin China. *See* also ANNAM.

Here the covid = 15 inches. The tael = 590.75 grains.

Cologne. *See* GERMAN EMPIRE, and PRUSSIA.

Until recently the Cologne mark was used throughout Germany in weighing the precious metals. This should equal 3,609 troy grains; but the standard copy at Hamburg is 1 grain lighter.

Colombia, or New Granada.

The metric system of weights and measures has recently been adopted. The former system was of Castilian origin.

Money.—The peso, or dollar, is exactly equal to five francs French currency. It is divided into 10 decimos and 100 centavos. 10 pesos make 1 gold condor. The value of the peso in United States customs is $0.965.

COIN TABLE.

COINS.	Material.	Value.
Old doubloon. Bogota	Gold.	$15.6106
" " Popayan	"	15.3775
Condor of 10 pesos. Legal value	"	9.6476
" " " " By U. S. mint assay	"	9.6751
Peso. Weight 25 grammes	Silver.	0.9726
" By U. S. mint assay	"	0.9692

Corea. *See* CHINA.

Corsica. *See* FRANCE.

A few liquid measures of Italian or Spanish origin may be met with.

Costa Rica. *See* CENTRAL AMERICA.

Crete, or **Candia.**

For length, the pic = 25.09 inches, or 0.6373 metre.

For liquids, the oke = 0.3458 gallon. The mistate, for oil, = 2.948 gallons.

The carga = 4.32311 bushels.

For weight, the cantaro of 100 rottoli or 44 oka = 116.57 lbs.

The currency is essentially Turkish.

Cuba. *See* WEST INDIES.

Curacoa. *See* WEST INDIES.

Cyprus.

For length, the pic = 26.45 inches, or 0.6718 metre.

For liquids, the cass = 1.25 gallons.

For grain, etc., the medinno = 2.1312 bushels.

Weights.—The oka = 2.7957 lbs. The rotolo = 1⅞ oka, and 100 rotolos = 1 kantar or cantaro. Hence the kantar = 524.2 lbs., or 237.77 kilogrammes. The moosa is a weight of 112 lbs.

Demerara. *See* GUIANA.

Denmark.

Length.—12 linie = 1 tomme.
12 tomme = 1 fod = 12.358 inches, or 0.3139 metre.
2 fod = 1 aln.
3 aln = 1 favn.
5 " = 1 rode.

Road Measure.—The miil (= 12,000 aln) = 4.6812 miles, or 7.5335 kilometres.

Surface.—The töndeland (= 14,000 square aln) = 1.3635 acres, or 55.2 ares.

Liquid Measure.
4 poegel make 1 pot, = 1.0208 quarts, or 0.9666 litre.
2 pot " 1 kande.
39 " " 1 anker.

The pot = $\frac{1}{31}$ cubic fod. The tönde (for beer) = 4.25 cubic fod. The tönde (of tar) = 120 pot.

Dry Measure.—The tönde used for coal and charcoal = 5.5 cubic fod. Regular measures are as follows:

2 halvotting make 1 ottingkar.
2 ottingkar " 1 fjerdingkar.
2 fjerdingkar " 1 skoëppe.
8 skoëppe " 1 tönde, = 3.9477 bushels, or 139.098 litres.
This tönde = 4½ cubic fod, or 144 pot.

Weight.—10 ort make 1 quint.
10 quint " 1 pund, = 1.102368 pounds, or 500 grammes.
100 pund make 1 centner.

In this scale the pund is the pfund of the German Zollverein. The old pund was defined as the weight of $\frac{1}{62}$ cubic fod of rain-water at 16¾° Centigrade; or about 1.100885 lbs. avoirdupois.

16 old pund = 1 lispund; 20 lispund = 1 skippund.

For precious metals—

4 ort make 1 quintin.
4 quintin " 1 lod.
16 lod " 1 mark, = 0.5149 lb., or 233.56 grammes.

Apothecary's weight—

60 gran make 1 drachme.
8 drachme " 1 unze.
12 unze " 1 pund, = 0.788974 lb. avoirdupois.

Money.—The rigsdaler equals 6 marks, and each mark is divided into 16 skillings. 2 rigsdalers make 1 specie daler.

The krone is a money of account, worth in United States customs $0.268.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Dobbelt Christian d'or (14⅜ rigsdalers)...	Gold.	.....	896	$8.0124
Frederick d'or, or pistole (7⅛ rigsdalers)..	"	.....	896	4.0062
10 daler. By U. S. mint assay.....	"	204.96	895	7.9000
20 krone. " " " "	"	138.24	900	5.3580
Specie ducat (4½ rigsdalers).....	"	.....	879	2.6860
Dobbelt rigsdaler (specie daler).....	Silver.	.....	875	1.0926
" " By U. S. mint assay..	"	444.96	877	1.0840
Rigsdaler.....	"	.....	875	0.5463
" Old rate in U. S. custom-houses	"	.....	.....	0.5300
Halvdaler (½ rigsdaler).....	"	.....	875	0.2731
Mark (⅛ rigsdaler).....	"	.....	500	0.0910
4 skilling.....	Billon.	.....	250	0.0228
1 "	Bronze.	.....	.....	0.0057
½ "	"	.....	.....	0.0029

Dominica. *See* WEST INDIES.

East Indies. *See* INDIA, CEYLON, ANNAM, BIRMAH, SIAM, MALACCA, MOLUCCAS, PHILIPPINE ISLANDS, SOOLOO ARCHIPELAGO, JAVA, SUMATRA, BORNEO, etc.

Ecuador.

Formerly, Spanish weights and measures were employed. Now the metric system is in vogue.

The peso, or dollar, is the equivalent of the French 5-franc piece, and is rated in United States customs at $0.965.

The 4 escudo gold piece, by United States mint assay, weighs 207.84 grains, is 844 fine, and is worth $7.555.

Egypt.

Since 1871 the metric system has been legal.

Length.—4 kérats make 1 abdat.
3 abdats " 1 kadam.
2 kadam " 1 derah, deraâ, or pic.
4 derahs " 1 gasab.

Of the derah there are six different kinds, as follows: The Nile pic = 0.2545 metre; the native pic (derah baladi) = 0.5682 metre; the Constantinople pic (derah Istambuli) = 0.6691 metre; the cloth pic (derah hendazeh) = 0.6479 metre; the builder's pic (derah meimari) = 0.7500 metre; the itinerary or road-measure pic = 0.7389 metre.

The derah Istambuli = 26.34 inches.

Ancient measures were the natural cubit, 17.71 inches, and the royal cubit, 20.66 inches.

Road Measure.—For the itinerary derah or pic, *see* table of length.

2 bââh	make	1 cassaba (equal to 5 derahs).
500 cassabas	"	1 mili, = 1.148 miles, or 1.847 kilometres.
3 mili	"	1 farsakh or league.
4 farsakh	"	1 baride.
2 baride	"	1 { safar yome, of which 2½ make 1° of the meridian = 60 mili. }

Surface.—Land is partly measured by the squares of the derah meimari, and of the cassaba. (The cassaba, in length, = 3.55 metres.)

The feddan = 333⅓ square cassabas, and is divided into 24 kérat. Value of feddan, 1.038 acres, or 42.008 ares.

Liquid Measure.—The guirbeh = 70.4467 quarts, or 66⅔ litres.

Dry Measure.—

2 kérat	make	1 kharroubah.
2 kharroubah	"	1 thoumn-kaddah.
2 thoumn-kaddah	"	1 roub-kaddah.
2 roub-kaddah	"	1 nisf-kaddah.
2 nisf-kaddah	"	1 kaddah, = 1.735 quarts, or 1.91 litres.
2 kaddah	"	1 malouah.
2 malouah	"	1 roubouh, or rob.
2 roubouh	"	1 kélé.
2 kélé	"	1 ouebeh.
6 ouebeh	"	1 ardeb, = 2.603 bushels, or 91.72 litres.

These values are from the report of the United States Commissioners to the Paris Exposition of 1867. Other authorities give the ardeb = 5.1648 bushels, and the ardeb of Alexandria = 7.6907 bushels.

Weights.—4 kamha make 1 kérat.
24 kérat " 1 darhim or drachm, = 47.73 grains, or 3.0929 grammes.
400 darhims make 1 oke, oka, or occa, = 2.7275 lbs., or 1.237 kilogrammes.
144 darhims make 1 rotl, or rottolo = 0.9819 pound, or 445.41 grammes.
100 rotl make 1 cantaro = 98.19 lbs.

The harsela, used for weighing silk, is the oke. The darhim, when used for weighing gold, silver, or gems, is also known as the mitkal or metical.

Money.—40 paras make 1 piastre. As a money of account, the Egyptian dollar of 20 piastres now rates in United States customs at $1.0039. (Secretary of the Treasury, 1874.)

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Bedidlik, or 100-piastre piece. Legal rate.	Gold.	131.761	875	$4.9690
" " " U. S. mint assay	"	132.00	875	4.9740
50-piastre piece. Legal rate	"	65.881	875	2.4845
20 " " " "	"	.....	875	0.9940
5 " " " " Very rare	"	6.464	875	0.2475
Tallari or dollar, 20 piastres. Legal rate.	Silver.	429.591	833⅓	0.9900
Half-tallari, 10 " " "	"	214.796	833⅓	0.495
Quarter " 5 " " "	"	107.398	833⅓	0.2475
1 piastre, " "	"	20.883	750	0.0475
1 " By U. S. mint assay	"	19.200	755	0.0400
½ " Legal rate	"	10.441	750	0.0248
¼ " " "	"	5.221	750	0.0124
Piastre (40 paras) " "	Copper.	799.490	.....	0.0495
20-para piece " "	"	399.745	.....	0.0248
10 " " " "	"	199.872	.....	0.0124
5 " " " "	"	99.936	.....	0.0062

England. *See* GREAT BRITAIN.

Fayal. *See* AZORES.

Finland. *See* RUSSIA.

Formosa. *See* CHINA.

France (including CORSICA). *Colonial Possessions:* ALGERIA, SENEGAL, ISLE OF BOURBON, ISLAND OF ST. MARIE near MADAGASCAR, PONDICHERRY and other towns in INDIA, several of the WEST INDIA ISLANDS, FRENCH GUIANA or CAYENNE, the ISLANDS OF ST. PIERRE and MIQUELON near NEWFOUNDLAND, the MARQUESAS ISLANDS, and NEW CALEDONIA.

The metric system of weights and measures originated in France, just before the beginning of the present century. All its units are derived from the unit of length.

Length.—The unit here is the metre, which was intended to represent the ten-millionth part of the distance from the equator to the pole, measured over the surface of the earth. It slightly varies from this, however, and can therefore be regarded only as a unit of length represented by a bar of platinum in Paris, meas-

ured at the temperature of melting ice (0° Centigrade, or 32° Fahrenheit).

10,000 metres make 1 myriametre, = 6.214 miles.
1,000 " " 1 kilometre, = 0.6214 "
100 " " 1 hectometre, = 328.09 feet.
10 " " 1 decametre, = 32.809 "

The metre = 39.37079 inches.

1 metre equals 10 decimetres. Decimetre = 3.937079 inches.
1 " " 100 centimetres. Centimetre = 0.3937 "
1 " " 1,000 millimetres. Millimetre = 0.03937 "

Surface.—Squares of the metre and its derivatives are used. Also the are, equal to a square of ten metres to the side.

100 ares, or 10,000 square metres, make 1 hectare = 2.4714 acres.

The are of 100 square metres = 1076.43 square feet.

The $\frac{1}{100}$ of an are, 1 sq. metre, is the centare = 1550.06 square inches.

Capacity.—The litre is the unit for both wet and dry measure, and equals one cubic decimetre.

10,000 litres make 1 myrialitre, = 2641.8 U. S. gallons.
1,000 " " 1 kilolitre, = 264.18 " "
100 " " 1 hectolitre, = 26.418 " "
10 " " 1 decalitre, = 2.6418 " "

The litre = 1.05672 quarts, U. S. measure.

1 litre equals 10 decilitres. Decilitre = 0.211344 pint, " "
1 " " 100 centilitres. Centilitre = 0.02113 " " "
1 " " 1,000 millilitres. Millilitre = 0.002113 " " "

In dry measure the kilolitre = 28.3782 U. S. bushels; the hectolitre = 2.83782 bushels; the decalitre = 1.13513 pecks; the litre = 0.227 half-peck, and so on. In measuring wood and coal the kilolitre is known as the stere, the myrialitre as the decastere, and the hectolitre as the decistere.

Weight.—The standard of weight is the gramme, which represents the weight of one cubic centimetre of distilled water at its maximum density.

				Avoirdupois
1,000,000 grammes	make	1 millier or tonneau,	= 2204.62	lbs.
100,000 "	"	1 quintal,	= 220.462	"
10,000 "	"	1 myriagramme,	= 22.0462	"
1,000 "	"	1 kilogramme,	= 2.20462	"
100 "	"	1 hectogramme,	= 3.52739	oz.
10 "	"	1 decagramme,	= 0.35274	"

The gramme = 15.432349 grains.

1 gramme equals 10 decigrammes. Decigramme = 1.543235 "
1 " " 100 centigrammes. Centigramme = 0.15432 "
1 " " 1,000 milligrammes. Milligramme = 0.01543 "

The "Système Usuel," interdicted since 1840, was a popular compromise between the ancient system and the present one. In it, the metre was divided into two pieds or feet of twelve pouces each. Two metres made one toise, and twelve decimetres, one aune or ell. In weights, the livre or pound of 500 grammes was divided into two marcs, sixteen onces, one hundred and twenty-eight gros, and nine thousand two hundred and sixteen grains. The ancient French pied-de-roi was equal to 12.79 inches; six of these pieds made one toise, and two thousand toises one lieue-de-poste, or league. The ancient pound (poids-de-marce) previous to 1795 was equal to 1.0793 lbs. avoirdupois.

Money.—10 centimes make 1 décime; 10 décimes make 1 franc. The theoretical value of the franc in United States money is $0.1945. The value recognized in United States custom rates is $0.193.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
100-franc piece. Legal rate	Gold.	497.742	900	$19.2955
50 " " " "	"	248.871	900	9.6478
20 " " " "	"	99.548	900	3.8591
20 " " By U. S. mint assay...	"	99.360	899	3.8470
10 " " Legal rate.....	"	49.774	900	1.9296
5 " " " "	"	24.882	900	0.9648
Louis d'or, 1785.....	"	.....	.....	4.6604
" " 1810 to 1840.....	"	.....	.....	3.8258
5-franc piece. Legal rate.....	Silver.	385.750	900	0.9726
" " By U. S. mint assay..	"	384.000	900	0.9600
2-franc " Legal rate.....	"	154.320	835	0.3890
" " 1867-'8. By U. S. mint assay.....	"	153.600	835	0.3560.

COIN TABLE.—*Continued.*

COINS.			Material.	Weight.	Fineness.	Value.
Franc, weight 5 grammes.	Legal rate.		Silver.	77.160	835	$0.1945
Piece of 50 centimes.	"	"	"	38.580	835	0.0972
" " 20 "	"	"	"	15.432	835	0.0389
" " 10 "	"	"	Bronze.	154.320	.....	0.0195
" " 5 "	"	"	"	77.160	.....	0.0097
" " 2 "	"	"	"	30.864	.....	0.0039
" " 1 "	"	"	"	15.432	.....	0.00195

Equivalent in value to the French franc are the francs of Switzerland and Belgium, the lira of Italy, the peseta of Spain, and the drachma of Greece. These should weigh 5 grammes apiece, the minor silver coinage being proportionately heavy. Several of the South American states now have silver pesos or dollars weighing 25 grammes, and equivalent to the 5-franc piece of France. Of the bronze coins, whose weights in the above table are given in grains, the weight of each one is represented in grammes by the number of centimes; 10 centimes weighing 10 grammes, and so on downward.

Frankfort-on-the-Main. *See* also GERMAN EMPIRE.

Length.—12 linien make 1 zoll; 12 zoll make 1 werkschuh or fuss. This fuss = 11.205 inches. The elle = 21.55 inches. Surveyors use a fuss (feldfuss) of 14.006 English inches. This is decimally divided into 10 zoll or 100 linien. 10 feldfuss make 1 ruthe.

Surface.—The morgen = 16,000 square feldfuss = 0.5004 acre.

Liquid Measure.—4 eichmass, or 4½ neumass = 1 viertel; 20 viertel = 1 ohm; 6 ohm = 1 fuder. The viertel = 1.8945 gallons. The mass is divided into 4 schoppen.

Dry Measure.—4 schrott = 1 mässchen; 4 mässchen = 1 gescheid; 4 gescheid = 1 sechter; 2 sechter = 1 metze; 2 metzen = 1 simmer; 4 simmer = 1 malter or achtel.

The malter = 3.25626 bushels.

Weights.—2 heller = 1 pfennig; 4 pfennige = 1 quentchen; 4 quentchen = 1 loth; 2 loth = 1 unze; 8 unzen = 1 mark; 2

mark = 1 pfund. There were in Frankfort two different pfunds, this one (= 1.114073 lbs. avoirdupois) being about 8 per cent. heavier than the other. Apothecary weight has been long uniform throughout all Germany.

Money.—2 heller or pfennige = 1 kreuzer; 4 kreuzer = 1 batzen; 15 batzen = 1 gulden or florin; 1½ florins or 90 kreuzer = 1 thaler. The former gulden (1837) was worth $0.4126. In United States customs it rated at 40 cents. The value of the former gold ducat was $2.2876.

French Guiana. *See* GUIANA.

German Empire. *See* also BADEN, BAVARIA, BREMEN, BRUNSWICK, COLOGNE, FRANKFORT, HAMBURG, HESSE, HANOVER, LÜBECK, MECKLENBURG, PRUSSIA, SAXONY, and WÜRTEMBERG.

For old or local systems of weights, measures, and coinage, *see* these various headings. Recently the metric system has been adopted as the lawful system of Germany, with merely some trifling modifications.

Length.—The meter or stab, zentimeter or new zoll, millimeter or strich.

Surface.—The ar and hektar.

Capacity.—The liter or kanne, the hektoliter or fass. 50 liters make 1 scheffel; ½ liter is called a schoppen.

Weight.—The kilogramme, of 2 pfund; the dekagramme or neu-loth; dezigramme, zentigramme, and milligramme. 50 kilogrammes make 1 zentner; 1,000 kilogrammes make 1 tonne.

For the values of the above measures and weights, *see* the tables given under FRANCE.

Under the Zollverein the weights were a zollpfund of 30 zollloth, = 500 grammes or ½ kilogramme; the zollcentner of 100 zollpfund; the zollstein of 2 zollcentner. The münzpfund, used for gold and silver, and divided into 10,000 ass, also equaled 500 grammes.

Throughout Germany the apothecaries have used the apothecary weights of Nürnberg, or Nuremberg. The pfund of this sys-

tem is subdivided exactly as in English apothecaries' weight, and equals 0.788974 lb. avoirdupois.

Money.—The present standard is the mark of $\frac{1}{3}$ of a thaler. In United States customs it now rates at $0.2382. The vereinsthaler equals $\frac{1}{30}$ of a münzpfund of fine silver, and in Northern Germany is divided into 30 silbergroschen. In Southern Germany the florin or gulden rates $52\frac{1}{2}$ to the münzpfund of fine silver, and is divided into 60 kreuzer.

COIN TABLE. (*See also the various German States.*)

COINS.	Material.	Weight.	Fineness.	Value.
Ten-thaler piece. By U. S. mint assay..	Gold.	204.960	895	$7.9000
Vereinskrone. Should weigh just 10 grammes.....	"	154.320	900	6.6462
Vereinskrone. By U. S. mint assay....	"	.....	900	6.6420
Half-krone. Weight 5 grammes.....	"	77.160	900	3.3231
20 marks. Legal rate.	"	122 880	900	4.7620
Double vereinsthaler, $3\frac{1}{2}$ gulden	Silver.	.....	900	1.4409
Vereinsthaler. Legal rate.....	"	.....	900	0.7204
" By U. S. mint assay....	"	285.600	900	0.7140
Thaler, before 1857. Legal rate.....	"	.....	.....	0.7220
" " " By U. S. mint assay	"	341.760	750	0.7120
Gulden or florin of South Germany before 1857	"	.....	.....	0.4126
Gulden or florin of South Germany since 1857.....	"	.....	.....	0.4117
Gulden or florin of South Germany since 1857. By U. S. mint assay.....	"	163.200	900	0.408

Great Britain and Ireland.—*Colonial Possessions:* HELGOLAND, GIBRALTAR, MALTA and GOZO, in EUROPE; GAMBIA, SIERRA LEONE, parts of the GOLD COAST, CAPE COLONY, NATAL, the islands of FERNANDO PO, ST. HELENA, MAURITIUS, and the SEYCHELLES, in AFRICA; ADEN, BRITISH INDIA, parts of FARTHER INDIA, CEYLON, PENANG, MALACCA, SINGAPORE, LABUAN, and HONG-KONG, in ASIA; CANADA, NEW BRUNSWICK, NOVA SCOTIA, PRINCE EDWARD'S ISLAND, NEWFOUNDLAND, LABRADOR, HUDSON'S BAY TERRITORY, BALIZE, most of the WEST INDIA ISLANDS, BERMUDAS, GUIANA, and FALKLAND ISLANDS, in AMERICA; AUSTRALIA, TASMANIA, NEW ZEALAND, NORFOLK ISLAND, AUCKLAND ISLANDS, and the FEEJEE ISLANDS, in POLYNESIA.

Length.—3 barleycorns make 1 inch.
12 inches " 1 foot = 0.3047 metre.
3 feet " 1 yard = 0.91438 metre.
5½ yards " 1 rod, perch, or pole.
4 poles or 100 links " 1 chain.
10 chains " 1 furlong.
8 furlongs " 1 mile = 1.6093 kilom'rs.

The old Scotch mile was $1\frac{1}{8}$, and the old Irish mile $1\frac{3}{11}$ English miles.

A line = $\frac{1}{12}$ inch. A nail = $2\frac{1}{4}$ inches (cloth measure). A palm = 3 inches. A hand (in measuring height of horses) = 4 inches. A span = 9, a cubit 18, a Scotch ell 37.06, and an English ell 45 inches. A fathom is 6 feet, and a cable's length 120 fathoms. A league = 3 miles. A degree of the equator = 69.1613 miles, and a degree of meridian = 69,046 miles.

Surface.—
144 square inches make 1 square foot, = 9.29 sq. decimetres.
9 " feet " 1 " yard, = 0.836 sq. metre.
30¼ " yards " 1 " rod.
16 " rods " 1 chain.
40 " " " 1 rood.
4 roods " 1 acre, or 43,560 square feet.
640 acres " 1 square mile, = 259 hectares.
The acre = 0.405 hectare.

Liquid Measure.—The imperial gallon is here taken as the standard, and defined as the bulk of ten pounds of distilled water at the temperature of 62° Fahr. Its cubic capacity is 277.274 cubic inches. The gallon of the United States is 231 cubic inches; the old corn-gallon contained 268.8, and the old beer-gallon 282.

Wine Measure.—
4 gills make 1 pint, = 0.567932 litre.
2 pints " 1 quart, = 1.135864 litres.
4 quarts " 1 gallon, = 4.543458 litres.
36 gallons " 1 tierce.
54 " " 1 hogshead.
108 " " 1 pipe, butt, or puncheon.

But these larger measures are not always to be trusted. In practice, they are actually measured in gallons.

Ale and Beer Measure.—Up to the gallon, like wine measure

9 gallons	make	1 firkin.
2 firkins	"	1 kilderkin.
2 kilderkins	"	1 barrel.
3 "	"	1 hogshead.
2 hogsheads	"	1 butt.
2 butts	"	1 tun.

The value of such terms as barrel, pipe, hogshead, butt, puncheon, tun, etc., varies with circumstances. Thus, a hogshead of claret is about 46 gallons, one of brandy 55 to 60 gallons. The pipe, for different wines, ranges from 90 to about 120 gallons, and so on. These terms are not rigidly defined.

Apothecaries' Measure.—

60 minims	make	1 fluid drachm (ʒ).
8 drachms	"	1 " ounce (℥).
20 ounces	"	1 pint.
8 pints	"	1 imperial gallon.

Dry Measure.—Up to the gallon, the same as in liquid measure, the value of the gallon being the same.

2 gallons	make	1 peck,	= 9.0865 litres.
4 pecks	"	1 bushel,	= 36.3460 "
4 bushels	"	1 coomb.	
2 coombs	"	1 quarter,	= 8 bushels.
5 quarters	"	1 wey or load,	= 40 bushels.
2 weys	"	1 last,	= 80 bushels.

A strike is 2 bushels. A pottle is half a gallon.

Cubic Capacity in general.—A cubic foot = 1,728 cubic inches A cubic yard = 27 cubic feet.

42 cubic feet make 1 shipping ton (British).

Weight.—The standard is the pound, which is divided into 7,000 grains. These grains are of equal value in all the following tables:

Avoirdupois Weight.—

16 drachms	make 1 ounce (oz.),	= 28.35 grammes.
16 ounces	" 1 pound (lb.),	= 453.6 "
14 pounds	" 1 stone.	
2 stone	" 1 quarter (qr.), 28 pounds.	
4 quarters	" 1 hundred-weight (cwt.), 112 pounds.	
20 hundred-weight	" 1 ton, 2,240 pounds.	

Troy Weight.—

24 grains	make 1 pennyweight (dwt.).	
20 pennyweights	" 1 ounce,	= 480 grs., or 31.15 gram'es.
12 ounces	" 1 pound,	= 5,760 " or 373.76 "

By this scale, gold, silver, platinum, and some gems are weighed. Pearls and diamonds are weighed by the carat of 4 grains; 5 diamond grains being equal to 4 grains troy.

Apothecaries' Weight.—

20 grains	make 1 scruple.	
3 scruples	" 1 drachm.	
8 drachms	" 1 ounce	Same as in troy weight, as is also the grain.
12 ounces	" 1 pound	

These weights are used in compounding prescriptions. Druggists buy by avoirdupois.

Money.—

4 farthings	make 1 penny.	
12 pence	" 1 shilling.	
20 shillings	" 1 pound or sovereign,	= $4.8666.

In United States custom-houses it rates at $4.84.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Pound or sovereign. Legal rate.....	Gold.	123.147	916	$4.8666
Pound. Newly coined. By U. S. mint assay.....	"	123.264	916½	4.8650
Pound. Average worn. By U. S. mint assay.....	"	123.024	916½	4.8560
Half-sovereign. Legal rate.....	"	61.574	916	2.4333

COIN TABLE.—*Continued.*

COINS.	Material.	Weight.	Fineness.	Value.
Former coins no longer in circulation.				
Moldore = 27 shillings.....	Gold.	.....	.....	.....
Jacobus = 25 "	"	.....	.....	.....
Carolus = 23 "	"	.....	.....	.....
Guinea = 21 "	"	.....	.....	.....
Mark = 13*s.* 4*d*.....	"	.....	.....	.....
Half-guinea = 10*s.* 6*d*.....	"	.....	.....	.....
Angel = 10 shillings.....	"	.....	.....	.....
Seven-shilling piece.....	"	.....	.....	.....
Noble = 6*s.* 8*d*.....	"	.....	.....	.....
Crown, 5 shillings.....	Silver.	435.897	925	$1.1105
Half-crown.....	"	217.948	925	0.5552
Florin, 2 shillings.....	"	174.359	925	0.4522
Shilling.....	"	87.179	925	0.2261
" Newly coined. By U. S. mint assay.....	"	87.600	924½	0.2250
Shilling. Average worn. By U. S. mint assay.....	"	85.440	925	0.2190
Sixpence, or tester. Legal rate.....	"	43.589	925	0.1130
Fourpence, or groat. " "	"	29.060	925	0.0723
Threepence, or bit. " "	"	21.794	925	0.0565
Twopence. " "	"	14.530	925	0.0377
Penny. " "	"	7.265	925	0.0188
Penny. " "	Bronze.	.....	.....	0.0188
Halfpenny. " "	"	.....	.....	0.0094
Farthing. " "	"	.....	.....	0.0047

Greece.

The present system of weights and measures is chiefly metric.

Length.—Formerly there were two piki, one for silks of 25 English inches, another for linen and woolens of 27 inches. The present piki is the metre, with the usual subdivisions. The kilometre is called stadion. In ancient Greece the foot was equal to 11.81 English inches; the cubit was 1½ feet, the stadium was 400 cubits.

Capacity.—The litra, or litre; the kailon, or hectolitre. The former staro of 3 bachels was equal to 2.54835 bushels.

Weight.—400 drachms or 44 oke make 1 cantaro. In different places the cantaro has different values, ranging from 112 to 128 lbs.

The gramme is known as the drachme, the kilogramme as mina, and 1½ kilogrammes as talanton.

Money.—100 lepta or centimes make 1 drachme or franc. The drachme is the exact equivalent of the French franc, and rates in the United States at $0.193. Formerly its value was only $0.1761.

In gold, the 20-drachme piece, by United States mint assay, is 900 fine, weighs 88.8 grains, and is worth $3.442.

The silver 5-drachme piece, by the same authority, is 900 fine, weighs 345.12 grains, and is worth $0.863.

The true value of the present coinage is, of course, somewhat higher.

Greenland. *See* DENMARK.

Grenada. *See* WEST INDIES.

Guadeloupe. *See* WEST INDIES.

Guatemala. *See* CENTRAL AMERICA.

Guiana, British. *See* ENGLAND.

Guiana, French. *See* FRANCE.

Guiana, Dutch. *See* NETHERLANDS.

Guinea.

Length.—The jaktan = 4 yards, or 12 feet.

Weight.—2 media-tabla = 1 aguirage; 2 aguirages = 1 piso or uzan; 4 pisos = 1 benda-offa; 2 benda-offas = 1 benda. 3 media-tabla make 1 quinto; 6 media-tabla 1 seron; 10⅔ media-tabla 1 eggeba. The media-tabla = 31.02 grains troy. The akey is a weight of 20.03 grains. The rotl = 0.9538 lb. avoirdupois.

Money.—Reckoning is mostly in dollars.

Hamburg. *See* also GERMAN EMPIRE.

Length.—8 achtel = 1 zoll; 12 zoll = 1 fuss; 2 fuss = 1 elle. The fuss = 11.27 inches. Surveyors use the Rheinfuss (12.357 inches) decimally divided.

Road Measure.—The meile of 24,000 Rhenish feet is equal to 4.68 miles.

Surface.—The morgen = 117,600 square fuss, = 2.3852 acres.

Liquid Measure.—2 össel = 1 quartier; 2 quartier = 1 kanne; 2 kannen = 1 stübchen; 2 stübchen = 1 viertel; 5 viertel = 1 anker; 4 anker = 1 ahm; 6 ahm = 1 fuder. The eimer = 4

viertel; the tonne = 24 viertel; the oxhoft = 30 viertel. The viertel = 1.90737 gallons.

Dry Measure.—4 spinten = 1 himt; 2 himt = 1 fass; 2 fass = 1 scheffel; 10 scheffel = 1 wispel; 3 wispel = 1 last. The scheffel = 2.98811 bushels.

Weight.—4 pfennige = 1 quentchen; 4 quentchen = 1 loth; 2 loth = 1 unze; 8 unzen = 1 mark; 2 mark = 1 pfund; 14 pfund = 1 liespfund; 20 liespfund = 1 schiffpfund. The pfund = 1.067886 lbs. avoirdupois.

Money.—12 pfennige = 1 schilling; 16 schilling = 1 mark; 3 mark = 1 rixdollar. This mark = $0.2972; old United States customs rate $0.28. 34 marks are coined from the Cologne mark (3,608 troy grains) of fine silver. Banco is an imaginary value of account, in which the Cologne mark is divided into 27⅔ marks banco. The mark banco = $0.3642; old United States customs rate, $0.35.

The gold ducat = $2.2715.

Hanover. *See* also GERMAN EMPIRE.

Length.—12 linien or 8 achtel = 1 zoll; 12 zoll = 1 fuss; 2 fuss = 1 elle; 8 ellen = 1 ruthe. The fuss = 11.496 inches.

Road Measure.—The meile of 25.400 fuss = 4.6086 miles.

Surface.—60 square ruthen = 1 vorling; 2 vorling = 1 morgen of Calenberg. Also, 1½ drohn = 1 morgen of Calenberg. This morgen = 0.6472 acre.

Liquid Measure.—2 nössel = 1 quartier; 2 quartier = 1 kanne; 2 kannen = 1 stübchen; 2 stübchen = 1 viertel; 5 viertel = 1 anker; 4 anker = 1 ahm; 6 ahm = 1 fuder. 8 viertel = 1 eimer; 30 viertel = 1 oxhoft.

The viertel = 2.07198 gallons. For beer, 26 stübchen = 1 tonne; 4 tonnen = 1 fass.

Dry Measure.—4 vierfass or 3 drittel = 1 himt; 6 himt = 1 malter; 8 malter = 1 wispel; 2 wispel = 1 last. The malter = 5.30559 bushels.

Weight.—4 örtchen = 1 quentchen; 4 quentchen = 1 loth 2 loth = 1 unze; 8 unzen = 1 mark; 2 mark = 1 pfund. The pfund = 1.079444 lbs. avoirdupois.

Money.—The thaler of 24 gute groschen. The former silver thaler was worth $0.722. The former gold Louis d'or, Wilhelm d'or, or pistole, = $3.9593.

Hawaii. *See* SANDWICH ISLANDS.

Hayti. *See* WEST INDIES.

Hesse-Cassel. *See* also GERMAN EMPIRE.

Length.—12 linien = 1 zoll; 12 zoll = 1 fuss (waldfuss or standard foot). This fuss = 11.324 inches. The landfuss or surveyor's foot = 11.217 inches. 2 landfuss = 1 elle; 7 ellen = 1 ruthe.

Surface.—The acker (of 29,400 sq. landfuss) = 0.5897 acre.

Liquid Measure.—4 schoppen = 1 mass; 4 mass = 1 viertel; 20 viertel = 1 ohm; 6 ohm = 1 fuder. The mass for wine = 0.52423 gallon; for beer, 0.57667 gallon.

Dry Measure.—4 mässchen = metze; 4 metzen = 1 himt; 2 himt = 1 scheffel. The scheffel = 2.3 bushels.

Weight.—4 quentchen = 1 loth; 2 loth = 1 unze; 16 unzen = 1 pfund. The pfund = 1.067534 lbs. avoirdupois.

For apothecaries' weight, *see* GERMAN EMPIRE.

Money.—The former gold pistole or Wilhelm d'or, value 5 thaler, = $3.9822. Modern pistole or Friedrich-Wilhelm d'or = $4.009. Silver as in Hesse-Darmstadt.

Hesse-Darmstadt. (System of 1821.) *See* also GERMAN EMPIRE.

Length.—The fuss, = $\frac{1}{4}$ metre or 9.8427 inches, is divided decimally into 10 zoll of 10 linien each. 10 fuss make 1 klafter. The elle = $\frac{4}{5}$ metre.

Surface.—40,000 square fuss or 4 viertel make 1 morgen, = 0.6178 acre.

Solid.—The stecken for wood = 100 cubic fuss, or 55.177 cubic feet.

Liquid Measure.—4 schoppen = 1 mass; 4 mass = 1 viertel; 20 viertel = 1 ohm; 6 ohm = 1 fuder. The schoppen = $\frac{1}{2}$ litre or 0.52836 quart.

Dry Measure.—4 mässchen = 1 gescheid; 4 gescheid = 1 kümpf; 4 kümpf = 1 simmer; 4 simmer = 1 malter. The mässchen = ½ litre, or 0.001419 bushel. The malter = 36.326 bushels. For lime, the kalkbütte = 10 cubic fuss, or 5.5177 cubic feet.

Weight.—4 richtpfennig = 1 quentchen; 4 quentchen = 1 loth; 32 loth = 1 pfund; 100 pfund = 1 centner. The pfund = 500 grammes, or 1.1023 lbs.

Before 1821 the weights and measures were those of Frankfort.

Money.—Florins or gulden, of 60 kreuzer, of 4 pfennig.

COIN TABLE.

COINS.	Material.	Fineness.	Value.
Former ten-Gulden piece	Gold.	.....	$4.0371
" Karolin	"	.....	4.9920
Vereinszweithalerstücke. 2-thaler	Silver.	900	1.4409
Vereinsthaler. 1½-gulden	"	900	0.7204
2-Guldenstücke	"	900	0.8234
Gulden, or florin	"	900	0.4117
½-Gulden	"	900	0.2058
6-Kreuzerstücke	Billon.	.....	0.0720
3 "	"	.....	0.0360
1 "	"	.....	0.0120
Pfennig	Copper.	.....	0.0030

Hindostan. *See* INDIA.

Holland. *See* NETHERLANDS

Honduras. *See* CENTRAL AMERICA.

Hungary. *See* AUSTRIA.

There are some local weights and measures, and some local variations from general standards. In length, the arsin = 23.01084 inches, and the stab = 5.18565 feet. For liquids, the fass = 52.545 gallons; and the eimer varies from 15.03 gallons in Lower, to 19.37 gallons in Upper Hungary.

The metze = 1.77354 bushels. The oka is a weight of from 2.78 to 3.082 pounds.

Iceland. *See* DENMARK.

The alen = 22.47 inches.

India, British. The PRESIDENCIES of BENGAL, MADRAS, and BOMBAY.

India, French. PONDICHERRY and other minor cities.

India, Portuguese. GOA and other cities.

For FARTHER INDIA, *see* BIRMAH, ANNAM, SIAM, and MALACCA. *See* also CEYLON.

Originally, the weights and measures of India were extremely discordant, every petty state or city having its own system. For present purposes only the chief headings can be given, taking first the three Presidencies in their order.

1. BENGAL (CALCUTTA).

Length.—3 jows or barleycorns make 1 unglee.
4 unglees or fingers " 1 moot.
3 moots or hands " 1 span.
2 spans make 1 cubit, covid, or haut = 18 inches.
2 covids " 1 gez, guz, or yard, = 36 inches, or 0.914 metre.
2 guz make 1 fathom.

Another table divides the haut or covid into 8 gheria of 9 jaob each. The guz of Patna = 42.5 inches.

Road Measure.—The coss of 1,000 fathoms = 1.1364 miles.

Surface.—20 square covid = 1 chattack; 16 chattack = 1 cottah; 20 cottah = 1 biggah. The biggah = 0.3306 acre, or 13.38 ares.

Grains and liquids are generally measured by weight. Still, some *dry measures* can be given:

5 chattack = 1 khoonke; 16 khoonke = 1 raik; 4 raik = 1 pallie; 20 pallie = 1 soallee. The soallee = 2.3378 bushels. The kahoon, of 42.44 bushels, represents 2,986¾ pounds weight of grain. In the Mahratta country the koorah = 4.0615 bushels.

Weights.—There are two sets of values for these, the factory values and those of the bazaar. The latter are ten per cent. heavier than the former. The factory-weights are the ones given

5 siccas make 1 chattack.
16 chattacks " 1 seer.
40 seers " 1 maund, = 74.667 lbs., or 33.87 kilogrammes.

In the Mahratta country the maund = 26.249 lbs.; and at Malda it = 100.45 lbs. The pussaree is a weight of 10.27 lbs., and the pao for grain = 0.816114 lb.

For gold and silver, the new sicca weight or tola is used, of 180 grains; being $\frac{1}{3}$ grain heavier than the bazaar tola. For pearls, the ruttee = 2.825 grains. At Delhi the ruttee is used for precious metals and gems, and is 1.25 grains; another weight for similar purposes being the val, of 5.63 grains. Still another set of weights for precious metals exists, as follows: 2 punko = 1 nely; 2 nely = 1 dhan; 25 dhan = 1 anna of 14.04 troy grains.

Money.—12 pies or pice make 1 anna; 16 annas make 1 Company's rupee = $0.46217.

The sicca rupee is worth slightly more than the old rupee, and weighs just one new sicca or tola; 80 sicca rupees, or 36 copper annas, weigh one seer. The gold mohur = 15 sicca rupees.

In United States customs the Company's rupee formerly rated at 44½ cents; the sicca rupee is now received at $0.4584. By United States mint assays the rupee and gold mohur rank as follows: Silver rupee, weight 179.52 grains, 916⅔ fine, value $0.457. Gold mohur, weight 180 grains, 916⅔ fine, value $7.1059.

2. MADRAS PRESIDENCY.

Length.—The covid, cubit, or haut, is here very variable. At Madras it is 18.6 inches, nearly; at Masulipatan it is 19.125 inches; and, at Mysore, 19.1 inches. Two of these, at Mysore, make 1 gujah. At Travancore the kole = 29.065 inches; and on the Malabar coast the ady = 10.46 inches.

Road Measure.—At Seringapatam, the coss = 3.6458 miles. At Mysore, the hardary = 2.7344 miles, and the gavada 14.5833 miles.

Surface.—24 maoney make 1 casseney or cawney, of 240 square covid. At Madras the cawney = 1.3223 acres; in the Carnatic it is 1.0047 acres.

Capacity.—8 ollucks make 1 puddy.
8 puddies " 1 marcal, = 0.34884 bushel.
5 marcals " 1 parah or chunam.
80 parahs " 1 garce, = 139.535 bushels.

At Masulipatan the marcal = 0.403 bushel. At Mysore the candaca = 11.13 bushels. Both wet and dry measures are determined by weight.

Weight.— 10 pagodas make 1 pollam.
8 pollams " 1 seer.
5 seers " 1 vis (visay).
8 vis " 1 maund, = 25 lbs., or 11.34 kilogrammes.
20 maunds make 1 candy, = 500 lbs.

The candy (also called baruay) is 485.5 lbs. at Mysore and Seringapatam, and 695.5 lbs. on the Malabar coast. The mangal, for pearls, = 6 grains.

Money.—Essentially the same as in BENGAL. The star pagoda formerly rated in United States customs at $1.84. Its real value is $1.9102. The gold mohur of Madras = $7.0696.

3. BOMBAY PRESIDENCY.

Length.—16 tussoos make 1 hath or cubit, = 18.12 inches.
24 " " 1 guz " yard, = 27.18 "

At Guzerat, the guz = 23½ inches. The hath, haut, or covid, at Surat, = 20.9 inches; at Ahmednuggur, 14 inches.

Surface.—The biggah = 0.6074 acre.

Capacity.—16 adoulies make 1 parah.
8 parahs " 1 candy, = 25 bushels.
At Anjar 4 mapp make 1 shye, = 0.88243 bushel.
At Mangalore the mudi = 1.3019 bushels.

Weights.—30 pice or 72 tanks make 1 seer.
40 seers " 1 maund, = 28 lbs.
20 maunds " 1 candy, = 560 "

At Surat the candy = 340.16 lbs.; at Ahmednuggur, 1577.14 lbs. The maund is 26.23 lbs. at Anjar, 75.87 lbs. at Aurungabad, 79.78 lbs. in the Deccan, and 39.74 lbs. at Gujerat. For pearls, the ruttee = 8 grains.

Money.—100 reas make 1 quarter.

4 quarters or 16 annas make 1 rupee, = $0.46217.

100,000 is a lac, and 10,000,000 a crore of rupees. The gold mohur of Bombay = $7.1061.

4. PONDICHERRY.

The covid = 18 inches.

The garce = 103.967 bushels.

The maund = 25.9 lbs., the candy = 588 04 lbs.

For gold and silver, the nello = 0.37 grains.

The gold moon pagoda = $1.6015.

5. GOA.

The covado or cubit = 26.8 inches.

The maund = 24.75 lbs.; the candy or bahar = 495 lbs.

Portuguese weights and measures are somewnat used.

Ionian Islands.

With the exception of some scattered weights and measures of Italian or of Turkish origin, the British standards have been adopted.

Length.—The Jarda Ionia = 1 yard. The stadio = 22 yards.

Liquid Measure.—The dicotoli = 1 imperial pint; the gallone = 1 imperial gallon; the barile = 16 imperial gallons.

Dry Measure.—The chilo = 1 imperial bushel.

Weight.—The libbra sottile = 1 lb. troy; the libbra grosso = 1 lb. avoirdupois; the centinajo or talento = 100 lbs. avoirdupois. In old weights, the oke = 2.6998 lbs.; the cantaro = 118.8 lbs.

Money.—104 oboli = 1 Spanish dollar.

Ireland. *See* GREAT BRITAIN.

Italy.

For former local systems of coinage, weights, and measures, *see* MODENA, PARMA, ROMAN STATES, NAPLES, SARDINIA, VENETIAN LOMBARDY, and TUSCANY.

For weights and measures, the French metric system is employed.

The monetary system is also like that of France, the lira being the equivalent of the franc.

The present value of the lira in United States customs is $0.1930.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
20 lire. Legal rate.....	Gold.	.....	.....	$3.8591
" " By U. S. mint assay.....	"	99.36	899	3.8470
5 " " " " "	Silver.	384.00	900	0.9600
Lira. " " " "	"	76.80	835	0.1780

Jamaica. *See* WEST INDIES.

Japan.

Length.—The inc = 6.25 feet, or 1.906 metres.
The sals = 11.9291 inches, or 0.303 metre.

Capacity.—5 itchigau make 1 gonghau.
2 ghongau " 1 ischiomassé.
10 ischiomassé " 1 ittomassé (or sjoo?).
The itchigau is about 1.68 litres, or 1.775 quarts.

Weight.—The monme = 27.007 grains. The rjoo = 116⅛ grains, or 7.525 grammes.

Money.—Gold and silver ingots, whose value varies with the demand, are used in circulation; also coins of varying values, those of brass and copper having central holes. The chief value in commerce now is the yen, the equivalent of our trade dollar, and which is received in the United States customs (1874) at $0.997. The kobang, itzebu, and itakane, are no longer coined.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Kobang. } Two assays at U. S. mint	Gold.	173.76	568	$4.4400
" } showing variations.....	"	138.72	572	3.5760
20 yen. By U. S. mint assay.....	"	514.56	900	19.9440
Itakane.....	Silver.	.....	.....	2.9280
Itzebu. No longer coined.....	"	.....	.....	0.8650
" By U. S. mint assay.....	"	133.92	890	0.3310
Yen. " " " "	"	416.016	900	1.0400
50 sen. " " " "	"	192.96	800	0.4280

Java.

Old Dutch weights and measures are somewhat in use. Other weights and measures vary, having, perhaps, one value at Bantam, and another at Batavia.

Length.—The covid = ¾ of a yard. Other units are old Dutch.

Capacity.—The kanne = 0.394 gallon. The legger, for arrack, = 160.0 gallons.

The bambou, at Bantam, = 0.09223 bushel, and the koyang = 147.566 bushels. At Batavia the koyang = 62.432 bushels. This measure is for rice.

Weight.—10 catties make 1 gantang (for coffee); 100 catties make 1 pecul. The pecul = 135.6312 pounds. The bahar at Bantam = 396 lbs., that used for pepper = 406.78 lbs.; at Batavia its value is 610.17 lbs. The timbang, for grain, = 677.9625 lbs. At Bantam the tael = 0.1511 lb., and at Batavia it equals 0.0847 lb.

Money.—*See* NETHERLANDS. Prior to January 1, 1874, the rix-dollar of Batavia was rated in United States customs at 75 cents. It is divided into 48 stivers.

Liberia.

Weights, measures, and money, like the United States.

The dollar of Liberia rates in United States customs at $1.00.

Lombardy. *See* VENETIAN LOMBARDY, and ITALY.

Lubeck. *See* also GERMAN EMPIRE.

Length.—12 punkte = 1 linie; 6 linien = 1 zoll; 12 zoll = 1 fuss; 2 fuss = 1 elle. The fuss = 11.335 inches.

Liquid Measure.—2 ort = 1 planke; 2 planken = 1 quartier; 2 quartier = 1 kanne; 2 kannen = 1 stübchen; 2 stübchen = 1 viertel; 5 viertel = 1 anker; 4 anker = 1 ahm; 6 ahm = 1 fuder. The eimer is 4, and the oxhoft 30 viertel. The viertel = 1.9787 gallons.

Dry Measure.—(For wheat.) 4 fass = 1 scheffel; 4 scheffel = 1 tonne· 3 tonnen = 1 drömt; 8 drömt = 1 last. The scheffel

= 1.0097 bushels. For oats and fruit, the scheffel = 1.1213 bushels.

Weights.—4 pfennige = 1 quentchen; 4 quentchen = 1 loth; 2 loth = 1 unze; 8 unzen = 1 mark; 2 mark = 1 pfund. The pfund = 1.068744 lbs.

Money.—12 pfennige = 1 schilling; 16 schilling = 1 mark (Hamburg standard). The former gold ducat = $2.271, and the silver thaler of 2½ mark = $0.722.

Madagascar.

But little is known of the weights and measures of this island.

Length.—The rahf = 46.46 inches, or 1.18 metres. In the northern part of Madagascar its value is double this.

Capacity.—The bambou = 0.0568 bushel.

Weight.—For gold and silver, 3 nanki = 1 vari; 2 vari = 1 sompi. The sompi = 60 grains.

Madeira Islands. *See* PORTUGAL.

Some of the standards vary slightly from those of the mother country. The libra = 1.011 lbs. For wine, the pipa = 110 gallons. Prior to 1873 the milrea of Madeira rated in United States customs at $1.00.

Malabar Coast. *See* INDIA.

Malacca. Including STRAITS SETTLEMENTS.

Length.—At Singapore the covid or hasta = 18 inches. Another covid = 18.0529 inches. The jumba = 14.4 inches.

Surface.—The orlong = 1.3223 acres.

Weight.—100 catties = 1 pecul; 3 peculs = 1 bahar or candy. The catty = 1.35 lbs.; that used for gold and silver, 2.049143 lbs. The mace, or miam = 44.83 grains; at Singapore, 52 grains. The buncal, for gold (Singapore), = 822 grains. For tin, the tampang (an equivalent of the catty) = 1.356 lbs.; and the kip = 40.678 pounds.

Malay Archipelago. *See* BORNEO, CELEBES, JAVA, SUMATRA, the MOLUCCAS, etc.

Malta.

Length.—The canna = 8 palmi of 10.3 inches each. The foot = 11.17 English inches.

Capacity.—For oil, the caffiso = 5.499 gallons. For wine, the barile = 10.997 gallons. For corn, the salma = 8.224 bushels.

Weight.—The libbra or rottolo = 1¾ lbs. The cantaro = 100 rottoli.

Money.—20 grani = 1 taro; 12 tari = 1 scudo. The scudo of Malta used to rate in United States customs at 40 cents. 30 tari = 1 Sicilian dollar. Both dollars and doubloons circulate. The former gold doppia or pistole of 10 scudi (before 1800) was worth $4.6512; and the silver oncie (also before 1800) was worth $1.6955.

Manilla. *See* PHILIPPINE ISLANDS.

Marquesas Islands. NOW a FRENCH COLONY.

Martinique. *See* WEST INDIES.

Mauritius.

The weights and measures of Great Britain, and also those of the metric system, are used.

Money.—The current dollar of 100 cents. In public accounts the pound sterling is the standard. The Spanish dollar, French napoleon of 20 francs, and East India rupees, are also in circulation.

Mecklenburg. *See* also GERMAN EMPIRE.

The weights and measures are those of Hamburg; except in the case of measures of capacity, which come from Lübeck.

Mexico.

The weights and measures are Spanish, with many local variations. The metric system is now legal.

In length, the vara = 32.9 inches. In liquid measure, the frasco = 2½ quarts, and the baril = 20 gallons. In dry measure, the fanega = 1.55 bushels.

Weight.—25 libra = 1 arroba; 4 arrobas = 1 quintal. The tercio = 160 libra. The libra = 1.01418 lbs.

Money.—Formerly, the dollar was divided into 8 reals; now, the usual division into 100 cents is employed. The dollar is rated in United States custom-houses at $1.0475.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Doubloon, or onza	Gold.	.....	.....	$15.7471
" Newly coined. By U. S. mint assay	"	416.40	870½	15.6110
Doubloon. Average worn. By U. S. mint assay	"	416.40	866	15.5300
20 pesos or dollars	"	.....	.....	19.6800
" " of Maximilian. By U. S. mint assay	"	521.28	875	19.6430
20 pesos of Republic. By U. S. mint assay	"	518.88	873	19.5150
Peso or dollar	Silver.	.....	.....	1.0567
" " " Average. By U. S. mint assay	"	415.68	901	1.0400
Peso of Maximilian	"	.....	.....	1.0421
" " " By U. S. mint assay.	"	413.28	902½	1.0550

Mocha. *See* ARABIA.

Modena. *See* also ITALY.

Length.—6 piede = 1 cavezzo. The piè = 20.593 inches. The braccio = 22.741 inches.

Surface.—36 square piede = 1 square cavezzo; 4 square cavezzi = 1 tavola; 72 tavole = 1 biolca. The biolca = 0.7009 acre.

Liquid Measure.—2 boccali = 1 fiasco; 20 fiasci = 1 barile. The fiasco = 0.55028 gallon.

Dry Measure.—2 staja = 1 sacco. The stajo = 1.9978 bushels.

Weight.—16 ferlini = 1 oncia; 12 oncie = 1 libbra or lira. The libbra = 0.7044 lb.

Money.—15 lire Modenesi = 1 scudo. The scudo = $0.8055.

Moldavia. *See* ROUMANIA.

Molucca Islands.

The chief islands are GILOLO, AMBOYNA, CERAM, TERNATE, and the BANDA group. Being under control of the Netherlands, the

modern Dutch weights and measures are somewhat used. Still, there are other standards resembling those of Java, Sumatra, etc.

In AMBOYNA, the bahar = 597.61 lbs., the mace = 28½ grains, and the tael = 455.8 grains. Hence, 16 mace = 1 tael. The koyang = 55.3371 bushels.

In TERNATE, the catty = 1.3017 lbs.

Montenegro.

Coinage, weights, and measures, of the neighboring countries.

Montserrat. *See* WEST INDIES.

Morocco.

Length.—The codo, covid, covado, cadee, or dhra'a, as given by different authorities, varies from 19.85 to 22.48 inches. Perhaps 20.92 inches, or 0.5313 metre, is the best value. The pic = 26 inches.

Capacity.—The muhd or mud = 5.184 bushels.

Weight.—100 rotl = 1 cantaro. The rotl of commerce = 1.19 lbs.; that of the markets = 1.7 lbs.

Money.—Spanish dollars and doubloons circulate.

The gold boutki or bendoki = $1.9952. The silver rial of 1776 = $1.0449.

Muscat.

Length.—The covid = 39.13 inches.

Capacity.—34 sidios = 1 ferren. The ferren = 7.9254 gallons.

Weight.— 24 kotschas = 1 maund; 60 maunds = 1 candy. The maund = 8¾ lbs.

Money.—As in Persia and Arabia.

Naples. *See* also ITALY.

Length.—5 minuti = 1 oncia; 12 oncie = 1 palmo; 8 palmi = 1 canna. The palmo = 10.381 inches. 7½ palmi make 1 pertica or passo.

Road Measure.—The miglio of 7,000 palmi = 1.147 miles.

Surface.—The moggio of 50,625 square palmi = 0.8584 acre.

Liquid Measure.—60 caraffi = 1 barile; 12 barile = 1 botta, 2 botti = 1 carro. The caraffa = 0.1929 gallon. This scale is

for wine and spirits. For oil, 6 misurelle = 1 quarto; 16 quarti = 1 stajo; 16 staja = 1 salma. The stajo is sometimes divided into 20 pignate. The stajo = 2.61633 gallons.

Dry Measure.—24 misure = 1 tomolo; 36 tomoli = 1 carro. The tomolo = 1.5646 bushels.

Weight.—In general commerce the rotolo of $2\frac{7}{9}$ libbre is used, the libbra = 0.70722 lb. avoirdupois. The same libbra occurs in the following tables:

1. Weight for gold, silver, silk, spices, drugs, and colors. 20 accini = 1 trapeso; 3 trapesi or scrupoli = 1 dramma; 10 dramme = 1 oncia; 12 oncie = 1 libbra.

2. Apothecaries' weight. 20 accini = 1 scrupolo; 3 scrupoli = 1 drachma; 10 drachme = 1 oncia; 12 oncie = 1 libbra.

Money.—10 grani = 1 carlino; 2 carlini = 1 taro; 5 tari = 1 ducato.

The ducat, by United States law of 1846, rated at 80 cents.

The gold oncetta, or 3-ducati de regno, = $2.5067. The silver ducato = $0.8265. Scudo or piastre, of 12 carlini, = $0.992; or, by United States mint assay, $0.9437.

Natal. *See* CAPE OF GOOD HOPE.

Netherlands. *Colonial Possessions:* JAVA, SUMATRA, parts of BORNEO, BANCA, CELEBES, the MOLUCCAS, other smaller islands in the EAST INDIES, and part of NEW GUINEA. In America, DUTCH GUIANA, CURAÇOA, and other WEST INDIA ISLANDS.

Since 1817 the weights and measures of Holland have been of the metric system; merely some of the old Dutch names have been retained. Compare FRANCE.

Length.—The streep or millimetre, duim or centimetre, palm or decimetre, el or metre, roede or decametre, and mijle or kilometre. Before 1817 the voet was a measure of 11.15 inches, and the old Amsterdam el was 27.08 inches.

Surface.—The vierkante roede or are, and the bunder or hectare.

Liquid Measure.—The vingerhoed or centilitre, maatje or decilitre, kan or litre, and vat or hectolitre.

Dry Measure.—The maatje or decilitre, kop or litre, schepel or decalitre, mudde or hectolitre, scheepston (wisse) or kilolitre, and last or 30 hectolitres.

Weight.—The korrel or decigramme, wigtje or gramme, lood or decagramme, ons or hectogramme, Niederlandsch pond or kilogramme, and centnaar of 100 kilogrammes.

In apothecaries' weight a pond of 375 grammes is subdivided into ounces, drachms, scruples, and grains, exactly as in the United States and Great Britain.

Money.—5 cents make 1 stiver.

20 stivers " 1 florin or guilder, = $0.4084.

50 stivers " 1 rijksdaaler.

Formerly, 12 groot made 1 schilling. In United States customs the florin now rates at $0.405. Formerly it rated at $0.40.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Double William. 20 florins, about.....	Gold.	207.657	900	$8.0514
Double ducat.....	"	107.825	983	4.5668
William. 10 florins, about.....	"	103.828	900	4.0257
" By U. S. mint assay.....	"	103.200	899	3.9970
Ducat.....	"	53.912	983	2.2834
Half-William.....	"	51.914	900	2.0123
Rijksdaaler. 2½ florins. Weight 25 grammes.....	Silver.	385.750	945	1.0212
Ryder. (For colonial trade.).....	"	.....	.....	1.3189
Guilder, or florin. 10 grammes weight.	"	154.320	945	0.4084
Half-guilder. 5 " "	"	77.160	945	0.2042
½-guilder. (For colonies).....	Billon.	49.067	720	0.1021
1/5 " (" ").....	"	19.315	720	0.0408
1/10 " (" ").....	"	9.414	720	0.0204
25 cents. (Pays-Bas.).....	"	55.162	640	0.1021
10 " (" ").....	"	21.605	640	0.0408
5 " (" ").....	"	10.570	640	0.0204
2½ " (Colonies.).....	Copper.	192.875	.....	0.0102
Cent. (").....	"	74.064	.....	0.0041
" (Pays-Bas.).....	"	59.328	.....	0.0041
½-Cent. (" ").....	"	29.664	.....	0.0020
" (Colonies.).....	"	35.494	.....	0.0020

Nevis. *See* WEST INDIES.

New Brunswick. *See* CANADA.

New Caledonia. (French Colony.)

Newfoundland. *See* CANADA.

New Granada. *See* COLOMBIA.

New South Wales. *See* AUSTRALIA.

New Zealand. Same as AUSTRALIA.

Nicaragua. *See* CENTRAL AMERICA.

Norway. (*See* SWEDEN for modern system.)

Length.—12 linie make 1 tum.

12 tum " 1 fot, = 11.6904 inches, or 0.297 metre.
2 fot " 1 aln.
3 aln " 1 famn.
5 " " 1 rode.

Road Measure.—The mül of 36,000 fot, and grenzmül of 30,000 fot. The latter = 5.5352 miles.

Surface.—The tunna or töndeland = 56,000 square fot. 4 kappland = 1 fjerding; 4 fjerding = 1 spannland; 2 spannland = 1 töndeland. The töndeland = 1.2132 acres.

Solid.—1 vedfamn = 108 cubic fot, or 99.855 cubic feet.

Liquid Measure.—

4 jungfrus make 1 qwarter.
4 qwarters " 1 stop.
2 stops " 1 kanna, = 0.69106 gallon, or 2.617 litres.
48 kannas make 1 tunna.

Dry Measure.—

4 orts make 1 qwarter.
4 qwarters " 1 stop.
2 stops " 1 kanna.
7 kannas " 1 fjerding.
4 fjerdings " 1 span, = 2.0786 bushels, or 73.2419 litres.
2 spans make 1 tunna.
The tunna also = 32 kappe.

Weight.—4 qwintin make 1 lod.
2 lod " 1 untz.
16 untz " 1 skälpund, = 0.9373 lb.

This pund is divided into 8,848 as.

20 skälpunds make 1 lispund.
400 " " 1 skippund.

Apothecaries use a pund of 7,416 as, which is divided into untzs, drachmas, scrupels, and grans, as in England.

For gold and silver, the mark, of 4,384 as, is divided into 8 untzs, 16 lods, and 64 qwintins.

Money.—12 runstycken make 1 skilling.
120 skilling " 1 riksdaler, = $1.0929.

Former value of the riksdaler in United States custom-houses, $1.06. The crown now rates (Secretary of the Treasury, 1874) at $0.268.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Riksdaler, or specie-daler	Silver.	446.683	875	$1.0929
" " " By U. S. mint assay	"	444.960	877	1.0840
½ specie-daler	"	223.341	875	0.5464
1 ort	"	92.129	878	0.2186
12 skilling	"	44.598	878	0.1093
4 "	Bronze.	.....	.....	0.0364
2 "	"	.....	.....	0.0182
1 "	"	.....	.....	0.0091
½ "	"	.....	.....	0.0046

Nova Scotia. *See* CANADA.

Nubia. *See* EGYPT.

Oldenburg. *See* also GERMAN EMPIRE.

The former gold pistole = $3.9593.

Ottoman Empire. *See* TURKEY.

Palestine. *See* TURKEY.

Paraguay.

The peso of Paraguay rates in United States customs at $1.00. Weights and measures of Spanish origin.

Parma. *See* also ITALY.

Length.—12 atomi = 1 punto; 12 punti = 1 oncia; 12 oncie = 1 braccio di legno; 6 braccia = 1 pertica. This braccio = 21.344 inches. The piè is a measure of 22.428 inches.

Surface.—12 tavola = 1 staro; 6 stari = 1 biolca of 288 square pertica. The biolca = 0.7528 acre.

Liquid Measure.—As at Milan. *See* VENETIAN LOMBARDY.

Dry Measure.—8 quarteroli = 1 mina; 2 mine = 1 stajo or staro. The stajo = 1.334 bushels.

Weight.—24 grani = 1 denaro; 24 denari = 1 oncia; 12 oncie = 1 libbra; 25 libbre = 1 rubbio. The libbra = 0.7197 pound.

Money.—The gold sequin, or zecchino, = $2.2691. Gold pistole = $4.2676. Gold 20-lire = $3.8591. Silver ducato (prior to 1815) = $0.9933.

Persia.

No regular system of weights and measures applies to the whole country.

Length.—The archin arisch = 38.28 inches, and the archin schah = 31.46 inches. At Ispahan, the guerze or gueza = 37.39 inches, or 0.949 metre.

Capacity.—4 sextarios make 1 chenica.
2 chenicas " 1 capicha.
25 capichas " 1 artaba, or arta, = 1.8514 bushels, or 65.236 litres.

The artaba also equals 8 collothun.

Weight. — 2 mascais make 1 dirhem.
50 dirhems " 1 rattel.
6 rattels " 1 batman.

In Tauris the batman = 6.3408 lbs.; in Shiraz its value is double the above. In Ispahan, the mahnd shah = 13.6601 lbs.; while in Shiraz, Bushire, and Gamri, its value is 27.3202 lbs. In Teheran, the rik of 1,600 miskal = 17.075 lbs.

Money.—5 dinars make 1 kasbequis.
2 kasbequis " 1 dinar-bisti.
5 dinars-bisti " 1 shatree.
2 shatrees " 1 mahmoodi.
2 mahmoodis " 1 abassi.
50 abassi " 1 tomaun. In gold, = $2.2437.

There is also a half-tomaun in gold. In silver, the sahibkiran of Mohammed Shah = $0.2243; but this coin varies in value under different rulers.

Peru.

Weights and measures of Spanish origin.

The vara = 33.367 inches. The libra = 1.014286 lbs., the quintal = 100 libra, and the fanega = 140 libra.

Money.—A system based on the French was adopted in 1863. In it the sol (divided into 100 cents) is the equivalent of 5 francs. In United States customs the sol now rates at $0.9650.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Piece of 20 sols, = 100 francs	Gold.	.....	.....	$19.2953
" " " " By U. S. mint assay	"	506.40	898	19.2130
Old doubloon. " " " "	"	.....	.....	15.5567
Old dollar. " " " "	Silver.	415.63	901	1.0430
Dollar of 1858. " " " "	"	367.68	909	0.9280
Half-dollar, 1836–1838. By U. S. mint assay	"	207.84	650	0.3750
Sol. By U. S. mint assay	"	384.96	900	0.9600
" Legal value	"	.....	.....	0.9726

Philippine Islands. (Colony of SPAIN.)

The pecul = 139.45 lbs.

The caban of rice = 133 lbs.; of cocoa, 83½ lbs.

Poland. *See* RUSSIA, AUSTRIA, and PRUSSIA.

The former standards of Krakau (Cracow, in Austrian Poland) are worth partially citing.

Length.—The stopa (of 12 calow, etc.) = 14.032 inches.

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Liquid Measure.—The garniec = 0.99145 gallon. That of Warsaw was 1.05671 gallons.

Dry Measure.—The korzec = 3.4082 bushels. At Warsaw, 3.6324 bushels.

Weight.—The funt (of 2 mark or 48 skoyciec) = 0.895 lbs.

Money.—The former gold ducat (25 zloty) = $2.9887.

The silver zloty = $0.1146. There were also pieces of 2, 5 and 10 zloty.

Porto Rico. *See* WEST INDIES.

Portugal. *Colonial Possessions.*—The MADEIRA, AZORES, and CAPE VERDE ISLANDS, ISLAND OF ST. THOMAS, parts of GUINEA, MOZAMBIQUE, GOA, and other cities in INDIA, MACAO in CHINA, TIMOR and other islands in the MALAY ARCHIPELAGO.

The metric system has lately been adopted. The old style was as follows:

Length.—12 pontos make 1 linha.
12 linhas " 1 pollegada.
8 pollegadas " 1 palmo da craveira.
3 palmos " 1 covado.
5 palmos " 1 vara, = 43.28 inches, or 1.099 metres.
2 varas " 1 braça.

The grao = 2 linhas, and the dedo = 8 linhas.

Road Measure.—8 estadios make 1 milha, = 1.2786 miles.
3 milhas " 1 legoa.

Surface.—The geira is 4,840 square varas, = 1.4287 acres.

Cubic.—Timber is measured in cubic pollegadas, earth in cubic braças, brick and stone work in cubic palmas.

Liquid Measure.—
4 quartilhos make 1 canada.
6 canadas " 1 alquiére, pote, or cantaro.
2 alquiéres " 1 almude.

In Lisbon the alquiére = 2.18475 gallons, or 8.6299 litres.
" Oporto " " = 3.31279 " " 12.5399 "
26 almude make 1 pipa or botá.
2 pipas " 1 tonelada.

Dry Measure.—

2 maquias make 1 outava.
2 outavas " 1 quarto.
4 quartos " 1 alquiére.
4 alquiéres " 1 fanga.
15 fangas " 1 moio.

The fanga of Lisbon = 1.5347 bushels, or 54.0768 litres.
" " " Oporto = 1.9374 " " 62.2663 "

For coal, in Lisbon, the fanga = 21.1667 bushels.

Weight.—24 graos make 1 scrupulo.
3 scrupulos " 1 outava.
8 outavas " 1 onça.
16 onças " 1 arratel, = 1.01186 lbs., or 459 grammes.
32 arratels " 1 arroba.
4 arrobas " 1 quintal.
13½ quintals " 1 tonelada.

For gold and silver, a marco of ½ arratel is used. Apothecaries have a libra of 12 onças, or ¾ arratel.

Money.—The rei is an imaginary money of account, the sum of 1,000 reis being called a milreis. A million of reis is a conto of reis.

20 reis make 1 vintem.
100 " " 1 tostao or testoon.
320 " " 1 pataça.
400 " " 1 crusado.
480 " " 1 sello or new crusado.
1,000 " " 1 milreis.

The milreis now rates in United States customs at $1.0847.

The British pound rates in Portugal at 4,500 reis, and the French franc at 180 reis.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Coroa. (Crown, 5,000 reis.).....	Gold.	.....	.....	$5.8257
" By U. S. mint assay.....	"	147.84	912	5.8070
Milreis.....	Silver.	.....	.....	1.0815
500 reis. By U. S. mint assay.....	"	192.00	912	0.4860

Prince Edward's Island. *See* CANADA.

Prussia. *See* also GERMAN EMPIRE.

Length.—12 scrupel = 1 linie; 12 linien = 1 zoll; 12 zoll = 1 Rheinfuss. This fuss = 12.357 inches, or 0.3138 metre. 12 Rheinfuss = 1 ruthe. The elle = $2\frac{1}{3}$ fuss. Surveyors divide the ruthe decimally into 10 decimal fuss, 100 zoll, and 1,000 linien.

Road Measure.—The postmeile of 24,000 Rheinfuss = 4.6807 miles, or 7.532721 kilometres.

Surface.—The morgen of 180 square ruthen = 0.6309 acre.

Liquid Measure.—2 össel = 1 quartier; 30 quartier = 1 anker; 2 anker = 1 eimer; 2 eimer = 1 ohm; 6 ohm = 1 fuder. The anker = 9.07319 gallons, or 34.345 litres.

Dry Measure.—4 mässchen = 1 metze; 4 metzen = 1 viertel; 4 viertel = 1 scheffel; 12 scheffel = 1 malter; 6 malter = 1 last.

The wispel = 18 scheffel. The scheffel = 1.5597 bushels, or 54.9577 litres.

Cubic Measure.—The klafter = 108 cubic Rheinfuss, = 117.8 cubic feet. The haufen = $4\frac{1}{2}$ klafter.

Weight.—Formerly, the pfund (= 1.03118 lbs. avoirdupois) was divided into marks, unzen, loth, and quentchen, as in most of the other German states (for example, Hanover and Hamburg). This pfund was represented by $\frac{1}{66}$ of a cubic Rheinfuss of distilled water, weighed *in vacuo*, at the temperature of $65\frac{3}{4}°$ Fahr. $16\frac{1}{2}$ pfund made 1 liespfund, and 20 liespfund made 1 schiffpfund. 22 pfund made the stein, and 5 stein the centner. The more modern scale is as follows:

10 zent = 1 quentchen; 10 quentchen = 1 loth; 30 loth = 1 pfund; 100 pfund = 1 centner; 3 centner = 1 tonne. This pfund is the Zollverein pfund of 500 grammes, or 1.1023 lbs.

For gold and silver, the mark of $\frac{1}{2}$ the old pfund is divided into 16 loth or 288 gran.

Apothecaries' weight as in Nuremberg. *See* GERMAN EMPIRE.

Money.—For recent system, *see* GERMAN EMPIRE. Formerly, 12 pfennige made 1 groschen, 30 silbergroschen made 1 thaler. Still earlier, the thaler was divided into 24 gute groschen. The thaler equals in weight $\frac{1}{14}$ of a Cologne mark of fine silver.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Old ten-thaler piece. By U. S. mint assay	Gold.	204.960	903	$7.9710
Old Friedrich d'or	"	.....	.....	4.0096
Old ducat	"	.....	.....	2.0048
Vereinskrone	"	171.273	900	6.64615
Halbekrone	"	85.637	900	3.32308
Doppelthaler. 2 thalers	Silver.	571.555	900	1.4409
Thaler	"	285.778	900	0.7204
" By U. S. mint assay	"	285.600	900	0.7140
" Old. Before 1857. By U. S. mint assay	"	341.760	750	0.7120
Sechstelthaler, or 5 groschen	"	.....	520	0.1201
2½-silbergroschenstück	Billon.	.....	375	0.0600
Silbergroschen	"	.....	220	0.0240
½ silbergroschen	"	.....	220	0.0120
4 pfennige	"	.....	.....	0.0080
3 "	"	.....	.....	0.0060
2 "	"	.....	.....	0.0040
1 "	"	.....	.....	0.0020

Queensland. *See* AUSTRALIA.

Roman States. *See* also ITALY.

Length.—The commercial palmo = 8.796 inches; the mercer's palmo = 8.347 inches; the architect's palmo = 8.79 inches. The pié = 11.592 inches; at Ancona, 15.384 inches. The canna = 78.4 inches, the braccio of Rome = 30.732, and the braccio of Ancona = 25⅓ inches. Architects divide their palmo into 12 oncie of 10 decimi each; 10 of these palmi make 1 canna, and the catena of 10 stajoli is 57½ palmi. There is also an architect's pié or foot of 16 oncie, = 11 72 inches.

Surface.—The rubbio of 370,300 square architect's palmi = 4.5658 acres. It has various subdivisions.

Liquid Measure.—4 quartucci = 1 foglietta; 4 fogliette = 1 boccale; 32 boccale = 1 barile; 16 barile = 1 botte. For wine, the barile = 15.412, and for oil 15.185 gallons. In Bologna, 4 fogliette = 1 boccale; 15 boccale = 1 quarterone; 4 quarterone = 1 corba. This boccale = 0.346 gallon. The soma = 18.49 gallons at Ancona, and 43.386 gallons at Rome.

Dry Measure.—4 quartucci = 1 scorzo; 1⅔ scorzi = 1 starello; 4 starelli = 1 quarta; 4 quarte = 1 rubbio. At Rome, the

rubbio = 8.355 bushels; at Ancona, 7.974 bushels. In Bologna, 4 quarticini = 1 quarterone; 4 quarterone = 1 stajo; 2 staja = 1 corba. This corba is the same as in liquid measure, and = 2.232 bushels (20.7617 gallons, liquid).

Weight.—24 grani = 1 denaro; 24 denari = 1 oncia; 12 oncie = 1 libbra. In Bologna, 4 grani = 1 carato; 10 carati = 1 ferlino; 2 ferlini = 1 ottavo; 8 ottavi = 1 oncia; 12 oncie = 1 libbra. The libbra = 0.7477 lb. at Rome, 0.7984 at Bologna, and 0.7277 at Ancona.

Money.—10 bajocchi = 1 paolo; 10 paoli = 1 scudo. The scudo (of 1835) = $1.0465. The Madonna scudo of Bologna = $1.0445. In gold, the 10 scudi Romani of 1853 = $10.47; and the zecchino of Rome and Bologna prior to 1835 = $2.276. A modern piece of 2½ scudi, by United States mint assay, is worth $2.6047.

Roumania. (Moldavia and Wallachia.)

Length.—The palma = 10.89 inches. The khalebi, for woolens, = 26.43 inches, and the kot, for silk and linen, = 24.86 inches. The endaseh is 26.08 inches.

Capacity.—The viadra of 10 oka = 3.7434 gallons, or 14.1699 litres. The kilo = 12.345 bushels, or 434.98 litres.

Weight.—4 litra = 1 oka or occha; 44 okas = 1 cantaro. The oka = 2.818 lbs., or 1.2786 kilogrammes.

Money.—100 ban para = 1 piastre or lei. The lei is meant to be the equivalent of the franc. The silver piece of 2 lei, by United States mint assay, weighs 154.56 grains, is 835 fine, and worth $0.358.

Russia.

Length.—12 linia make 1 duime.
12 duimes " 1 foute, = 1 English foot, or 0.304761 metre.
7 foutes make 1 sagéne, sashen, or sachine.

4 verschoks make 1 tchetverk.
4 tchetverk " 1 archeen, archine, or arsheen.
3 archines " 1 sachine, = 7 feet, or 2.1335 metres.

Road Measure.—The verst or werst = 500 sachines, or 3,500 feet. The Lithuanian meile = 4.9958 miles, or 8.039816 kilometres.

Surface.—The deciatine = 2,400 square sachines, or 2.6997 acres.

Liquid Measure.—100 tcharkas = 1 vedro; 3 vedros = 1 anker; 40 vedros = 1 sarakowaja. The vedro = the volume of 750.57 cubic inches of distilled water, or 30 pounds weighed *in vacuo* at the temperature of 16⅔° Centigrade.

2 quars	make	1 polou-stoff.
2 polou-stoffs	"	1 stoff.
4 stoffs	"	1 polou-vedro.
2 polou-vedros	"	1 vedro.

The kronchka is $\frac{1}{10}$ vedro. The vedro = 3.249 gallons, or 12.299 litres.

Dry Measure.—

2 garnetz	make	1 tschetverka.
4 tschetverkas	"	1 tschetverik.
2 tschetveriks	"	1 pajak.
2 pajaks	"	1 osmina.
2 osminas	"	1 tschetviert, or chetviert.

The tschetverik = 0.7446 bushel, or 26.2367 litres.

Weight.—

96 dolis	make	1 zolotnick.
3 zolotnicks	"	1 loth.
8 "	"	1 lana.
12 lanas	"	1 funte, = 0.9028 lb., or 0.4095 kilogramme.
40 funtes	"	1 pood or pud.
10 poods	"	1 berkowitz or berkovetz.
3 berkovetz	"	1 packen.

In pharmacy, the funte is $\frac{7}{8}$ of the commercial funte, and is subdivided, as in England and Germany, into ounces, drachms, scruples, and grains.

Money.—100 copecks make 1 ruble or rouble. The ruble = $0.7779; or, in United States customs (1874), $0.7717. Before 1800 the ruble was of somewhat greater value.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Half-imperial. 5 rubles	Gold.	100.842	880	$3.9869
" By U. S. mint assay	"	100.800	916	3.9760
Ruble	Silver.	320.362	833	0.7779
" By U. S. mint assay	"	320.160	875	0.7780
Half-ruble, or poltinnik	"	159.838	833	0.3889
Quarter-ruble, or tschetvertak	"	80.948	833	0.1945
Fifth-ruble, or abassis	"	64.827	833	0.1556
15 copecks, or zloty-polski	"	48.020	820	0.1167
10 " " grivenik	"	32.928	820	0.0778
5 " " piatak	"	16.464	820	0.0390
Copeck	Bronze.	.....	.....	0.0078
Deneschika	"	.....	.....	0.0039
Polushka	"	.....	.....	0.0020

St. Bartholomew. *See* WEST INDIES.

St. Christopher's or **Kitt's.** *See* WEST INDIES.

St. Eustatius. *See* WEST INDIES.

St. Helena. (British Colony.)

St. John. *See* WEST INDIES.

St. Martin. *See* WEST INDIES.

St. Thomas. *See* WEST INDIES.

St. Vincent. *See* WEST INDIES.

Sandwich Islands.

Weights, measures, and money, as in the UNITED STATES. The barrel of whale-oil = 31½ gallons.

San Salvador. *See* CENTRAL AMERICA.

Santa Cruz, or **St. Croix.** *See* WEST INDIES.

Santa Lucia. *See* WEST INDIES.

Santo Domingo. *See* WEST INDIES.

Sardinia. *See* also ITALY.

Length.—12 atomi = 1 punto; 12 punti = 1 oncia. 12 oncie = 1 piè liprando. This piè = 20.228 inches. In Genoa there is a piè manuale = $\frac{2}{3}$ the above. In the same city, $5\frac{1}{2}$ oncie = 1 palmo; $2\frac{1}{2}$ palmi = 1 braccio; and about 9 palmi = 1 canna. In Turin and Piedmont generally, 6 piede liprando = 1 trabucco; 2 trabucci = 1 pertica. The raso = 14 oncie.

Road Measure.—The miglio ($4333\frac{1}{3}$ piede liprando) = 1.3835 miles.

Surface.—In Piedmont the giornata of 100 square pertica = 0.9393 acre.

Liquid Measure.—In Genoa, 90 amole or 50 pinte = 1 barile; 2 barili = 1 mezzaruòla. This barile = 17.084 gallons.

In Piedmont (Turin), 2 quartini = 1 boccale; 2 boccali = 1 pinta; 6 pinte = 1 rubbio; 6 rubbi = 1 brenta; 10 brente = 1 carro. The rubbio = 2.4804 gallons.

Dry Measure.—In Genoa, 12 gombette = 1 quarto; 8 quarti = 1 mina. The mina = 3.4257 bushels.

In Turin, 20 cucchiari = 1 copello; 4 copelli = 1 quartière; 2 quartière = 1 mina; 2 mine = 1 stajo; 3 staje = 1 sacco. The sacco = 3.2635 bushels.

Weight.—In Genoa, 24 grani = 1 denaro; 24 denari = 1 oncia; 12 oncie = 1 libbra; $1\frac{1}{2}$ libbre = 1 rottolo. The libbra = 0.70021 lb.; in *peso grosso* it is $\frac{1}{10}$ higher.

In Piedmont (Turin), 24 granotini = 1 grano; 24 grani = 1 denaro; 3 denari = 1 ottavo; 8 ottavi = 1 oncia; 12 oncie = 1 libbra. This libbra = 0.81332 lb. The marco, for gold and silver, is $\frac{2}{3}$ libbra. The apothecaries' libbra is $1\frac{1}{4}$ marco.

Money.—100 centesimi = 1 lira nuova. The lira = $0.193. The silver livre of Genoa formerly rated in United States custom-houses at 21 cents.

Former Coinage.—In Genoa, the gold zecchino or sequin, coined for the Levantine trade, = $2.2906. The gold dopia or Genovine, old, = $23.5913; new, = $14.9082. The doppie (20 lire nuove) of Sardinia = $3.8591. The carlino of Piedmont (1786) = $27.4582; of Sardinia (1773) = $9.4586. The silver scudo (6 lire Piedmontese), before 1800, = $1.3689. The scudo or scutcheon dollar of Sardinia ($2\frac{1}{2}$ lire of S.), 1773, = $0.9091.

Saxony. *See* also GERMAN EMPIRE.

Length.—10 linien = 1 zoll; 12 zoll = 1 fuss; 2 fuss = 1 elle; 8 ellen = 1 ruthe. The fuss = 11.148 inches, and the architect's fuss of Leipsic = 11.13 inches.

Road Measure.—The postmeile (24,000 fuss) = 4.223 miles. The polizei-meile (32,000 fuss) = 5.6303 miles.

Surface.—The morgen of 76,800 square fuss = 1.5216 acres.

Liquid Measure.—4 quartier = 1 nössel; 2 nössel = 1 kanne; 63 kannen = 1 eimer; 2 eimer = 1 ohm; 6 ohm = 1 fuder. Also, 54 kannen = 1 anker; 3 eimer = 1 oxhoft; 5 eimer = 1 fass. The kanne = 0.3181 gallon. In Dresden the measures are $\frac{1}{9}$ smaller than the above, which belong to Leipsic.

Dry Measure.—4 mässchen = 1 metze; 4 metzen = 1 viertel; 4 viertel = 1 scheffel; 12 scheffel = 1 malter; 2 malter = 1 wispel. The scheffel = 2.9485 bushels.

Weight.—15 gran = 1 pfennig; 4 pfennige = 1 quentlein; 4 quentlein = 1 loth; 2 loth = 1 unze; 8 unzen = 1 mark; 2 mark = 1 pfund. The pfund = 1.0306 lbs. The centner = 110 pfund. For apothecaries' weight, *see* GERMAN EMPIRE.

Money.—12 pfennige = 1 neugroschen; 30 neugroschen = 1 thaler. Values as in Prussia.

The former August d'or (and double August d'or in same proportion) = $4.0098. The former specie-thaler of 24 gute groschen ($1\frac{1}{3}$ thaler) = $1.091.

Sennaar. *See* EGYPT.

Servia.

Length.—The archine = 28.0 inches, or 0.711 metre.

Weight.—100 drachm = 1 litra; 4 litra = 1 oka. The oka = 2.8188 lbs., or 1.2786 kilogrammes.

Money.—80 para = 1 piastre. The piastre = $0.0794.

Siam.

Length.—2 soks make 1 ken.
2 kens " 1 vouah, = 6.306 feet, or 1.922 metres

Road Measure.—The röenung of 2,000 vouahs = 2.3886 miles, or 3.84401 kilometres.

Capacity.—

40 sats make 1 sesti, = 0.33462 bushel, or 11.7908 litres.
40 sesti " 1 cohi.

In liquid measure the cohi = 13.385 gallons, or 50.6662 litres.

Weight.—

4 ticals make 1 tael.
20 taels " 1 catty.
50 catties " 1 pecul, = 133.35 lbs., or 60.488 kilogrammes.

Money.—Gold ticals, each equal to 10 silver ticals. The latter is worth about 61 cents, United States coinage.

Siberia. *See* RUSSIA.

Sicily. *See* also NAPLES, and ITALY.

Length.—8 palmi = 1 canna. The palmo = 9.5297 inches.

Liquid Measure.—The salma = 22 gallons.

Dry Measure.—The salma generale = 7.8 bushels; the salma grosso = 10 bushels.

Weight.—The libbra of 12 oncie = 0.70723 lb. The rottolo grosso of 33 oncie = 1.925 lbs.; the rottolo sottile of 30 oncie = 1.75 lbs.

Money.—20 grani = 1 taro; 12 tari = 1 scudo; $2\frac{1}{2}$ scudi = 1 oncia. The silver Sicilian scudo of 1785 = $0.9833. Prior to 1873 the oncia rated in United States custom-houses at $2.40.

Sierra Leone. (British Colony.)

Society Islands. (French Colony.)

Sooloo Archipelago.

The mace = 58.33 grains. The tael = 0.0833 lb. The lachsa = $66\frac{2}{3}$ lbs., or 30.236 kilogrammes.

Soudan. *See* EGYPT.

South Australia. *See* AUSTRALIA.

Spain. *Colonial Possessions.*—CANARY ISLANDS, CUBA, PORTO RICO, etc.; PHILIPPINE ISLANDS, part of NEW GUINEA. *See* also BALEARIC ISLANDS.

The metric system of weights and measures is now the legal system. Its units have Spanish names, however, as "litro," "metro," etc. The following tables belong to the old system, as used in Madrid:

Length.— 12 puntos = 1 linea; 12 lineas = 1 pulgada; 6 pulgadas = 1 sesma; 2 sesmas = 1 piè (foot); 3 piès = 1 vara; 4 varas = 1 estadal. The piè = 11.128 inches; also, 9 lineas = 1 dedo; 12 dedos = 1 palma.

Road Measure.—The legua of 8,000 varas = 4.2151 miles.

Surface.—The yugada, of 50 fanegadas, or 460,800 square varas, = 79.355 acres.

Liquid Measure.—4 copas = 1 quartillo or cuartillo; 4 quartillos = 1 azumbre; 8 azumbres = 1 arroba mayor or cantara. This arroba = 4.26304 gallons, and is supposed to contain the weight of 35 libras of pure water. The arroba for oil, divided into 4 quartillos or 100 panillas, = only 3.31853 gallons.

Dry Measure.—4 ochavillos = 1 racion; 4 raciones = 1 quartillo; 2 quartillos = 1 medio; 2 medios = 1 almude; 12 almudes = 1 fanega; 12 fanegas = 1 cahiz. The fanega = 1.599 bushels.

Weight.—12 granos = 1 tomin; 3 tomines = 1 adarme; 2 adarmes = 1 ochava or dracma; 8 ochavas = 1 onza; 8 onzas = 1 marco; 2 marcos = 1 libra. The libra = 1.016097 lbs. The apothecaries' libra = 0.7615 lb.

25 common libras = 1 arroba; 4 arrobas = 1 quintal; 20 quintals = 1 tonelada.

Money.—The peseta of 100 centimes = 1 French franc.

Formerly, 20 reals vellon, or 10⅔ reals of plate, made 1 duro, piastre, or dollar. Also, 10 reals made 1 escudo; each real being divided into 10 decimes.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
Doblon. 10 escudos	Gold.	129.411	900	$5.1678
" " " By U. S. mint assay.	"	129.984	896	5.0150
4 escudos	"	51.764	900	2.0038
2 "	"	25.882	900	1.0019
100 reals. By U. S. mint assay	"	128.640	896	4.9640
80 " " " " "	"	103.200	896½	3.8640
Doblon de Isabel	"	.....	.....	4.9861
4 pistoles, or onza de oro	"	.....	.....	16.1154
Recent duro or dollar. 2 escudos	Silver.	400.563	900	1.0100
Dollar of 5 pesetas. By U. S. mint assay.	"	384.000	900	0.9600
Escudo	"	200.281	900	0.5049
Peseta. Former	"	80.113	810	0.2020
" Present. By U. S. mint assay.	"	76.800	835	0.1780
Media peseta. Former	"	40.057	810	0.1010
Real	"	20.028	810	0.0505
Medio real. (These coins contain 95 parts copper, 4 tin, and 1 zinc.)	Bronze.	192.900	.....	0.0252
Cuartilla.	"	96.450	.....	0.0126
Decima.	"	38.580	.....	0.0050
Media-decima.	"	19.290	.....	0.0026

Sumatra.

Length.—2 jankal = 1 etto; 2 etto = 1 hailoh; 4 hailoh = 1 tung. The tung = 4 yards, or 12 feet.

Capacity.—The koolah = 0.1173 bushel. The pakha=0.14535 gallon.

Weight.—The catty = 2.118 lbs.; the maund, 77 lbs.; the pecul, 133⅓ lbs.; the candil, 423¼ lbs. For camphor, the ootan=4 lbs.

Surinam. *See* GUIANA.

Sweden. *See* also NORWAY.

The systems here are decimal, but based upon former units.

Length.—10 linien make 1 tum.

10 tum " 1 fot, = 11.679 inches, or 0.2966 metre.

10 fot " 1 stang.

10 stang " 1 ref.

Surface.—The square ref, of 10,000 square fot, = 0.2175 acre, or 8.8007 ares.

Capacity.—In both wet and dry measure cubes of the measures of length are used; as, the cubic tum, cubic fot, etc. In both wet and dry measures the canna is $\frac{1}{10}$ of a cubic fot, and equals

2.617188 litres. In dry measure this = 0.7428 bushel. In liquid measure it = 0.6914 gallon.

Weights.—100 korns make 1 ort.
100 orts " 1 skalpund, = 0.93379 lb., or 423.57 grammes.
100 skalpunds make 1 centner.
100 centners " 1 last.

Money.—100 ore make 1 riksdaler-ryksmint, or crown. The former riksdaler silfver was 48 skillings of 12 ore each. The crown now rates in United States custom-houses at $0.268. The riksdaler, prior to 1873, rated at $1.06.

COIN TABLE.

COINS.	Weight.	Material.	Fineness.	Value.
Four-ducat	Gold.	214.909	976	$9.0420
Two "	"	107.455	976	4.5210
Ducat	"	53.727	976	2.2605
" By U. S. mint assay	"	53.280	975	2.2370
Carolin (10 francs). By U. S. mint assay.	"	49.920	900	1.9350
Riksdaler silfver	Silver.	523.581	750	1.1023
½-Riksdaler silfver	"	261.765	750	0.5512
Riksdaler-ryksmint, or crown	"	130.887	750	0.2756
" By U. S. mint assay.	"	131.040	750	0.2730
$\frac{1}{10}$-riksdaler silfver. 10-ore	"	52.353	750	0.1102
$\frac{1}{20}$ " " 5-ore	Bronze.	.....	.....	0.0551
2-ore	"	.....	.....	0.0220
Ore	"	.....	.....	0.0110
½-ore	"	.....	.....	0.0055

Switzerland.

Prior to 1856, almost every canton in Switzerland had its own system of weights and measures. The present uniform system is upon a semi-metric basis.

Length.—10 traits make 1 ligne.
10 lignes " 1 pouce.
10 pouces " 1 pied, = 11.8112 inches, or 30 centimetres.
2 pieds " 1 brache.
2 braches " 1 aune.
3 aunes " 1 toise.
The perche = 10 pieds.

Road Measure.—The lieue of 16,000 pieds = 2.983 miles, or 4.8 kilometres.

Surface.—The arpent, 400 pieds square, = 3.558 acres, or 1.44 hectares.

Liquid Measure.—

25 pots make 1 setier.
4 setiers " 1 muid.

The pot is subdivided into $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$. It represents $\frac{1}{78}$ cubic pied, or the bulk of 3 livres weight of pure water at the temperature of 4° Centigrade. The pot = 1.585 quarts, or 1.5 litres.

Dry Measure.—10 emines make 1 quateron (usually divided into $\frac{1}{4}$ and $\frac{1}{15}$). 10 quaterons make 1 sac.

There is a double quateron also. The quateron, $\frac{5}{9}$ of a cubic pied, is the volume of 30 livres of pure water at 4° Centigrade. It is equal to 0.4257 bushel, or 15 litres.

Weight.— The livre or pfund of the Zollverein is used, equal to 1.1023 lbs., or 500 grammes. 100 livres make 1 quintal. 2 loth = 1 once; 16 onces = 1 livre.

The livre of pharmacy = 375 grammes, and is divided into 12 onces, and these again are subdivided into drachmes, scrupules, and grains, as in England.

Money.—100 rappen make 1 franc. This franc is the exact equivalent of the French franc. *See* FRANCE.

By United States mint assay, the silver 2-franc piece of Switzerland weighs 153.6 grains, is 835 fine, and worth $0.356.

Syria. *See* TURKEY.

Tahiti. *See* SOCIETY ISLANDS.

Tasmania. Like AUSTRALIA.

Tobago. *See* WEST INDIES.

Tonquin. *See* ANNAM.

Tortola. *See* WEST INDIES.

Trinidad. *See* WEST INDIES.

Tripoli.

BARCA and FEZZAN have the same weights and measures.

Length.—The dra'a or pik of 3 palmi 26.42 inches. The arbi dra'a or lesser pik 19.029 inches.

Liquid Measure.—The mataro, for oil, 6.163 gallons.

Dry Measure.—

4 orbahs make 1 temen.
4 temen " 1 ueba or hueba, 3.0452 bushels.
Also, 20 tiberi 1 cafiso, 1.152 bushels.

Weight.—16 kharoubas make 1 drachma.
10 drachmas " 1 uckia.
16 uckias " 1 rotl.
100 rotls " 1 cantaro, 109.714 lbs.
Also, 40 oke " 1 cantaro or kantar.
The metical, for gold and silver, 73.6 grains.

Money.—100 para 1 gersh (plural, gurush). The gersh = = $0.1046. Under Mahmoud II. (1808) the gersh = $0.1865. The mahbub of 20 piastres = $0.8709 in United States custom-houses.

Tunis.

Length.—The dra'a hendaseh, for woolen goods, 26.49 inches. The pik, for linen, 18.62 inches; for silk 24.83 inches.

Liquid Measure.—The metter or mitre 2.6417 gallons.

Dry Measure.—The cafiz or caffiso 14.0753 bushels.

Weight.—16 uckia make 1 rotl or rottolo, 1.1175 lbs.

For meat, etc., the rotl sucky1.2532 lbs., and the rotl ghredari for vegetables 1.4098 lbs. The cantaro 100 rotl.

For gold and silver, the metical 59.7 grains.

Money.—16 kharoubas make 1 piastre, $0.1286. In United States customs it rates at $0.125.

The gold 25-piastre piece, by United States mint assay, weighs 77.28 grains, is 900 fine, and worth $2.9954. The silver 5-piastres (same authority) weighs 245.28 grains, is 898½ fine, and worth $0.612.

Turkestan.

Length.—The hasch = 28 inches, or 0.711 metre.

Weight.—8 seer make 1 batmann, = 276.41 lbs., or 125.38 kilogrammes.

Money.—44 pools make 1 tenga.
21 tengas " 1 tilla, = $2.7155.

Turkey.

In Turkey (both European and Asiatic) the weights and measures vary in the different provinces, and with the nature of the substances to be measured. The following system is that used in Constantinople:

Length.—Builders' and surveyors' scale—
12 nocktats make 1 hatt.
12 hatts " 1 parmack.
24 parmacks " 1 archine, = 29.528 inches, or 75 centimetres.

Scale for measuring cloths—
2 guirahs make 1 ouroub.
8 ouroubs " 1 endaseh, = 25.7 inches, or 0.6523 metre.

At Smyrna the endaseh = 24.65 inches, and the pic = 26.29 inches. The pic = 26.63 inches at Aleppo, and 22.83 inches at Damascus.

Capacity.—4 chiniks make 1 kilo, = 1.00075 bushels, or 35.26 litres.
4 kilos " 1 fortin.
For liquids, the almud = 1.381 gallons.

Weight. — 4 karats make 1 deuke.
4 deukes " 1 dirhem or drachm.
100 dirhem " 1 chequi.
4 chequis " 1 oke or occa, = 2.8337 lbs., or 1285.4 grammes.
44 okes make 1 kantar or cantaro.

In Asia Minor and Syria there is also the batman of 6 okes. Also the rottolo, which ranges from 1.2656 lbs. at Smyrna to 5.0642 lbs. at Aleppo.

Money.—40 paras make 1 piastre. The piastre is also divided into 100 aspers. Its value is $0.04325. United States custom-house rate, $0.0439.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.	Value.
500-piastres, or becheyuslyk	Gold.	557.552	916⅔	$21.6250
250 " " ykiyuslyk	"	278.776	916⅔	10.8125
100 " " yusilykmedjid	"	111.224	916⅔	4.3250
100 " By U. S. mint assay	"	110.880	915	4.3700
50 " " ellyklyk	"	55.612	916⅔	2.1625
25 " " yirmibechlyk	"	27.806	916⅔	1.0812
20 " " yrmilykmedjid	Silver.	371.224	830	0.8650
20 " By U. S. mint assay	"	369.600	830	0.8520
10 " " onlyk	"	185.612	830	0.4325
5 " " bechelyk	"	92.806	830	0.2162
2 " " ikylyk	"	37.194	830	0.0865
Piastre, or kourouche	"	18.597	830	0.0432
½-piastre, or yaremlyk	"	9.298	830	0.0216
40 paras (= 1 piastre)	Bronze.	331.360	.....	0.0432
20 "	"	165.680	.....	0.0216
10 "	"	82.840	.....	0.0108
5 "	"	41.420	.....	0.0054
Para	"	8.284	.....	0.0011

Tuscany. (Florence and Leghorn.) *See* also ITALY.

Length.—12 denari = 1 soldo; 10 soldi = 1 palmo; 2 palmi = 1 braccio; 4 braccia = 1 canna. The palmo = 11.49 inches. The architect's canna = 5 braccia.

Road Measure.—The miglio of 2,833⅓ braccia = 1.0277 miles.

Surface.—The saccato of 16,500 square braccia = 1.389 acres.

Liquid Measure.—For wine, etc., 2 quartucci = 1 mezzetta; 2 mezzette = 1 boccale; 2 boccale = 1 fiasco; 20 fiasci = 1 barile. The barile = 12.0444 gallons, and should weigh 133⅓ libbre. The barile of spirits weighs 120 libbre. For oil, the barile is only 16 fiasci, and weighs 120 libbre. 2 barile of oil = 1 soma.

Dry Measure.—2 bussoli = 1 quartuccio; 2 quartucci = 1 mezzetta; 2 mezzette = 1 metadella; 4 metadelle = 1 quarto; 2 quarti = 1 mina; 2 mine = 1 stajo; 3 staja = 1 sacco; 8 sacci = 1 moggio. The moggio = 16.5904 bushels.

Weight.—24 grani = 1 denaro; 3 denari = 1 dramma; 8 dramme = 1 oncia; 12 oncie = 1 libbra. The libbra = 0.7486 lb.

Money.—100 centesimi = 1 lira. Lira = $0.1637. Formerly rated in United States custom-houses at $0.16. The deni of 10 lire = $1.6341. The francescone, of 10 paoli or 4 fiorini (before 1839), = $1.0904. The fiorino or florin (before 1850) = $0.2728. In Lucca, the silver 5-lire nuove Leucchesi of 1840 = $0.7221.

United States of America.

In weights and measures, the United States differs but little from GREAT BRITAIN. By an act of Congress, passed in 1866, the metric system was legalized, but as yet it has not come into use. Some of the units in this country are slightly varied from the true units, however, as for instance the metre, which is really 39.37079 inches, is legalized at 39.37 inches. These variations will be given in their proper places below.

Length.—The ordinary system as in GREAT BRITAIN. In the metric system the *metre* is legal at 39.37 inches. The standard of length is a brass copy of the English standard yard, by Troughton of London, and is deposited in the office of weights and measures at Washington. The scale is 82 inches long, the standard yard being from the 27th to the 63d inch. At 62° Fahr. it exceeds the true British standard yard by 0.00087 inch.

Surface.—As in GREAT BRITAIN. The *hectare* is legal at 2.471 acres, and the *are* at 119.6 square yards.

Cubic Measure.—For wood, 16 cubic feet make 1 cord foot, and 8 cord feet make 1 cord.

Shipping Measure.—40 cubic feet make 1 United States shipping ton. 100 cubic feet make 1 register ton. The latter value is merely to facilitate computation. Wheat in bulk is a good standard of comparison, since the long ton of 2,240 pounds of this grain occupies just about 40 cubic feet. The register tonnage of a vessel represents her entire internal capacity. Her real carrying capacity for cargo is, however, 20 to 25 per cent. less than this; so that her actual measurement cargo in shipping tons is from $1\frac{1}{3}$ to 2 times the number indicated in the register.

Liquid Measure.—The standard is the Winchester gallon of 231 cubic inches. In GREAT BRITAIN the imperial gallon is 277.274 cubic inches. Hence the imperial gallon = 1.2003 United

States gallons. The *litre* is legal at 1.0567 quarts. The following table is the usual one for wine measure:

4 gills	make	1 pint.	(pt.)
2 pints	"	1 quart.	(qt.)
4 quarts	"	1 gallon	(gal.)
42 gallons	"	1 tierce.	
63 "	"	1 hogshead.	(hhd.)
84 "	"	1 puncheon.	
126 "	"	1 pipe.	
252 "	"	1 tun.	
10 "	"	1 anker.	
18 "	"	1 runlet.	
31½ "	"	1 barrel.	(bbl.)

In some of the States 32 gallons make a barrel. Beer measure as in GREAT BRITAIN. Apothecaries' measure also as in GREAT BRITAIN, except that its gallon and subdivisions are of the Winchester scale.

Dry Measure.—The bushel is 2150.42 cubic inches, that of ENGLAND being 2218.192 cubic inches. Hence the imperial bushel = 1.0315 United States bushels. In dry measure the litre is legal at 0.908 quart. The following is the usual table:

2 pints	make	1 quart.
4 quarts	"	1 gallon of 268.8 cubic inches.
2 gallons	"	1 peck. (pk.)
4 pecks	"	1 bushel. (bush.)
36 bushels	"	1 chaldron. (For coke and coal.)

Weight.—The three scales, avoirdupois, troy, and apothecaries', are the same as in GREAT BRITAIN. The standard avoirdupois pound of the United States, copied from the British standard, is 0.00734 grain too heavy. The gramme is legal at 15.432 grains, and the kilogramme at 2.2046 lbs. For postal purposes, *at present*, 15 grammes is reckoned the equivalent of the half-ounce. As for the ton, in some States it rates at 2,240 lbs., and in others at only 2,000. The latter value is the more usual and the more rational one.

Money.— 10 mills make 1 cent.
10 cents " 1 dime.
10 dimes " 1 dollar.
10 dollars " 1 eagle.

In the West and South, 12½ cents make a *bit*. In New York this sum is called a *shilling*. The *shilling* of the New England States is 16⅔ cents. These values, however, are not legal.

The present nickel five-cent piece represents the metric system; being 2 centimetres in diameter, and weighing 5 grammes.

COIN TABLE.

COINS.	Material.	Weight.	Fineness.
Double-eagle. $20	Gold.	516.000	900
Eagle. $10. Before July 31, 1834	"	270.000	900
" Since " " "	"	258.000	900
½-Eagle. $5. Before " " " (None before 1834 now in circulation.)	"	135.000	900
" Since " " "	"	129.000	900
¼-Eagle. $2.50. Before " " "	"	67.500	900
" Since " " "	"	64.500	900
Three dollars	"	77.400	900
One dollar	"	25.800	900
Trade dollar	Silver.	420.000	900
Dollar. Before Jan. 18, 1837	"	416.000	900
" From " " " to 1853	"	412.500	900
Half-dollar. Before " " "	"	208.000	900
" By act of " " "	"	208.000	900
" Since March 31, 1853	"	192.000	900
" By act of 1873, weighs 12½ grammes.	"	192.900	900
Quarter-dollar. Before Jan. 18, 1837	"	104.000	900
" By act of " " "	"	103.125	900
" Since March 31, 1853	"	96.400	900
" Act of 1873, weighs 6¼ grammes	"	96.450	900
Dime. Before Jan. 18, 1837	"	41.600	900
" By act of " " "	"	41.250	900
" Since March 31, 1853	"	38.400	900
" By act of 1873, weighs 2½ grammes	"	38.580	900
Half-dime. Before Jan. 18, 1837	"	20.800	900
" By act of " " "	"	20.625	900
" Since March 31, 1853	"	19.200	900
Three-cent piece. Before 1853	"	12.375	900
" " Since "	"	11.520	900
Five-cent " Copper and nickel	Alloy.	77.160	.....
Three-cent " " " "	"	30.000	....
Two-cent " Copper, tin, and zinc	Bronze.	96.000	.....
Cent. Weight variable for different dates	Copper.	.....	.....
" Copper and nickel	Alloy.	72.000	.....
" Copper, tin, and zinc	Bronze.	48.000	.....
Half-cent. Obsolete. Weight variable	Copper.	.....	.....
			.....

The following tables give the standard weight and least current weight of gold coins, both singly and in sums.

1. In sums. Coins over $1.00 in value:

Sum of $100.	Standard,	5.375	oz.	Least current weight,			5.348	oz.
" $500.	"	26.875	"	"	"	"	26.741	"
" $1,000.	"	53.760	"	"	"	"	53.481	"
" $5,000.	"	268.750	"	"	"	"	267.407	"

Of the gold dollar, 5,000 pieces are current when weighing not less than 266.145 ounces troy.

2. Single coins:

Name of Coin.	Standard.	Least Current Weight.
Double-eagle,	516.0 grains,	513.42 grains.
Eagle,	258.0 "	256.71 "
Half-eagle,	129.0 "	128.36 "
Quarter-eagle,	64.5 "	64.18 "
Three dollars,	77.4 "	77.02 "
Dollar,	25.8 "	25.55 "

Uruguay.

Weights and measures of Spanish origin.

The fanega = 7.776 bushels, or 274 litres.
The libra = 1.014286 lbs.

In money, the patacon rates in United States custom-houses at $0.9498.

Van Diemen's Land. *See* TASMANIA.

Venetian Lombardy. (VENICE and MILAN.) *See* also ITALY.

Length.—12 atomi = 1 punto; 12 punti = 1 oncia; 12 oncie = 1 braccio. Also, 2 piede = 1 braccio. The piè = 15.61 inches at Milan, and 13.69 at Venice. The metre and its divisions are also used, under Italian names.

Road Measure.—The miglio = 1 kilometre, or 0.6214 mile.

Surface.—100 square palmi make 1 tornatura, = 1 are, or 0.0247 acre. Also, 1 campo = 0.6881 acre.

Capacity.—10 coppi = 1 pinta; 10 pinte = 1 mina; 10 mine = 1 soma. The pinta is the French litre, or 0.26418 gallon.

Weight.—10 grani = 1 denaro; 10 denari = 1 grosso; 10 grossi = 1 oncia; 10 oncie = 1 libbra metrica, or kilogramme. This libbra = 2.2046 lbs. 10 libbre = 1 rubbio.

For gold and silver, 24 grani = 1 denaro; 24 denari = 1 oncia; 8 oncie = 1 marco. The marco = 7.5562 troy ounces.

Money.—5 centesimi = 1 soldo Austriaca; 20 soldi = 1 lira. This lira = 20 Austrian kreuzers; hence, 3 lire = 1 Austrian florin.

In gold, the sovrano = $6.778. The zecchino, or sequin, by French mint assay, is worth $2.2704.

In silver, the scudo nuove = $1.0109; the scudo Cisalpine = $0.8971; and the croisat, or scudo della croce of the Venetian Republic, = $1.2839. The Filippo of Milan (1786) = $1.1408

Venezuela.

Weights and measures of Spanish origin.

The vara = 32.874 inches, or 0.835 metre.

The arroba = 17.052 quarts, or 16.137 litres.

The quintal of 4 arrobas = 101.4381 lbs., or 46.012 kilo grammes.

The peso of 100 centajos = $0.7836. In United States custom-houses it rates at $0.7773.

Victoria. *See* AUSTRALIA.

Wallachia. *See* ROUMANIA.

West Australia. *See* AUSTRALIA.

West Indies.

1. SPANISH.—*Cuba*, *Porto Rico*, *Isle of Pines*, and *Culebra*.

2. FRENCH.—*Martinique*, *Deseada*, *Guadeloupe*, *Marie Galante*, *Les Saintes*, and part of *St. Martin*.

3. SWEDISH.—*St. Bartholomew*.

4. DUTCH.—Part of *St. Martin*, *Buen Ayre*, *Curaçoa*, *Oruba*, and *Tortuga*.

5. DANISH.—*Santa Cruz*, *St. Thomas*, and *St. Jan* or *John*.

6. BRITISH.—*Jamaica, Barbadoes, Grenada, Santa Lucia, St. Vincent, Trinidad, Tobago, Antigua, Barbuda, Dominica, Nevis, Montserrat, St. Kitt's, Tortola,* the *Bahamas,* and various minor islands.

7. INDEPENDENT.—*Hayti,* including the separate republic of *Santo Domingo.*

In the SPANISH WEST INDIES, SPANISH weights and measures are used, with slight variations. The vara = 33.375 inches. The fanega = 3.12367 bushels. The arroba = 4.1 gallons.

In money, the peso of Cuba and Porto Rico now rates in United States custom-houses at $0.9258.

In the FRENCH possessions, the old weights and measures of France are used. In MARTINIQUE, the aune = 1.30148 yards; the barique = 50 gallons; the livre = 1.079176 lbs.; the carré = 3.1909 acres. LES SAINTES has the BRITISH system.

In ST. BARTHOLOMEW, SWEDISH values are used.

In the DANISH possessions the weights and measures are those of DENMARK; although ENGLISH standards of length are also used.

In the DUTCH WEST INDIES, except CURAÇOA, the weights and measures of HOLLAND are employed. CURAÇOA has a SPANISH system, in which the vara = 33.375 inches.

In the BRITISH possessions, the weights and measures are practically those of the UNITED STATES. In Jamaica, 102.023 gallons make a puncheon. The pound of Jamaica rates in United States custom-houses at $4.865.

In HAYTI and SANTO DOMINGO are still the old French weights and measures, as in the FRENCH WEST INDIES. The dollar of HAYTI is the same in value as the dollar of the UNITED STATES.

Wurtemberg. *See* also GERMAN EMPIRE.

Length.—10 punkte = 1 linie; 10 linien = 1 zoll; 10 zoll = 1 fuss; 10 fuss = 1 ruthe. The klafter is 6 fuss. The fuss = 11.26 inches, and the Stuttgart elle = 24.18 inches.

Surface.—The morgen of 38,400 square fuss = 0.7789 acre.

Liquid Measure.—4 schoppen = 1 mass; 10 mass = 1 immi; 16 immi = 1 eimer; 6 eimer = 1 fuder. The mass = 0.4853 gallon.

Dry Measure.—4 viertlein = 1 ecklein; 2 ecklein = 1 mässlein; 2 mässlein = 1 achtel; 2 achtel = 1 viertel; 4 viertel = 1 simri; 8 simri = 1 scheffel. The scheffel = 5.0292 bushels.

Weight.—As in the Zollverein, whose pfund is 500 grammes. For gold and silver, the mark = 233.855 grammes. The apothecaries' pfund (subdivided as in Germany generally) = 357.6337 grammes.

Money.—60 kreuzers = 1 florin; $5\frac{3}{4}$ florins = 1 ducat.

COIN TABLE.

COINS.	Material.	Fineness.	Value.
Vierfache jubiläums-dukaten	Gold.	986	$9.4898
Former Friedrich d'or. 11 gulden	"	.....	4.5410
Dukaten	"	986	2.3725
Doppeltevereinsthaler	Silver.	900	1.4409
Zwei-gulden	"	900	0.8252
Vereinsthaler	"	900	0.7204
Gulden or florin	"	900	0.4126
Half-gulden	"	.....	0.2063
6-kreuzer	Billon.	$333\frac{1}{3}$	0.0413
3 "	"	$167\frac{1}{2}$	0.0206
1 "	"	.....	0.0069
$\frac{1}{2}$ "	Copper.	.....	0.0034
$\frac{1}{4}$ "	"	.....	0.0017

Yucatan. *See* MEXICO.

Zanzibar.

Length.—The ohra = 22.48 inches, or 0.571 metre.

Capacity.—The djezla = 7.305 bushels, or 257.4 litres.

Weight.—The bazla = 34.226 lbs., or 15.525 kilogrammes. The mane = 3.0071 lbs. The franzella of 36 rotoli = 35.2822 lbs.

Money.—The Austrian "Maria Theresa thaler" is here known as the "Janurio dollar."

PART SECOND.

I.—MEASURES OF LENGTH.

In the following table the units of length of various nations are arranged alphabetically; the value of each one being given in English or American feet or inches, and in French metres. The metre is now a legal standard in the Argentine Confederation, Belgium, Brazil, Chili, Colombia, Ecuador, Egypt, France, Germany, Greece, Italy, Mexico, Netherlands, Spain, and the United States. After January 1, 1875, it will also be the standard in Austria.

Any value in feet may be converted into Russian sachines by simply dividing by seven.

MEASURES.	Locality.	Feet or Inches.		Metres.
Ady	Malabar Coast	10.460	inches.	0.26568
Aln	Denmark	24.716	"	0.62777
"	Iceland	22.470	"	0.57078
"	Norway	23.3808	"	0.59386
Arbi dra'a	Tripoli	19.029	"	0.48333
Archin arisch	Persia	38.28	"	0.97229
" schah	"	31.46	"	0.79907
Archine	Russia	28.00	"	0.71119
"	Servia	28.00	"	0.71119
"	Turkey	29.5281	"	0.75000
Aune	Martinique	46.8533	"	1.19005
"	Switzerland	47.2449	"	1.20000
Barleycorn	Great Britain	0.33334	"	0.00085
Braça	Portugal	7.218	feet.	2.20007
Braccio	Ancona	25.3333	inches.	0.64346
"	Genoa	20.9535	"	0.53221
"	Modena	22.741	"	0.57761
"	Naples	27.508	"	0.69869

MEASURES.	Locality.	Feet or Inches.	Metres.
Braccio di legno	Parma	21.344 inches.	0.54013
"	Rome	30.732 "	0.78079
"	Tuscany	22.98 "	0.58114
"	Venice	27.38 "	0.69544
Brache	Switzerland	23.6225 "	0.60000
Braza	Argentine Confed.	5.6868 feet.	1.73323
Canna	Genoa	7.3553 "	2.24185
"	Malta	6.8667 "	2.09293
"	Naples	6.9207 "	2.10934
"	Rome	6.5334 "	1 99135
"	Sicily	6.3531 "	1.93639
Cavezzo	Modena	10.2965 "	3.13578
Centimetre	France, etc	0.393708 inch.	0.01000
Cheung	China	10.9375 feet.	3.33369
Chik. Official	"	13.125 inches.	0.33337
" Surveyor's	"	12.7 "	0.32257
" Commercial	"	14.76 "	0.37489
" Itinerary	"	12.17 "	0.39112
Cobido, or covid	Mocha	19.000 "	0.48259
Covado	Goa	26.800 "	0.68071
"	Portugal	25.968 "	0.65957
Covid, hath, or haut	Ahmednuggur	14.0000 "	0.35559
"	Bengal	18.0000 "	0 45719
" hath, or haut	Bombay	12.1200 "	0.46026
"	Ceylon	18 5000 "	0.46989
"	Cochin-China	15.0000 "	0.38099
"	Java	27.0000 "	1.37157
" or haut	Madras	18.6000 "	0.47243
" codo, covado, cadree, or dra'a	Morocco	20.9200 "	0.53186
"	Muscat	39.1300 "	0.99388
"	Pondicherry	18.0000 "	0.45719
" or hasta	Singapore	18.0000 "	0.45719
" hath, or haut	Surat	20.9000 "	0.53085
Decametre	France, etc	32.80899 feet.	10.000000
Decimetre	"	3.937079 inches	0.10000
Dedo	Portugal	0.7212 "	0.01832
"	Spain	0.67923 "	0.01773
Derah, deraa, dhra'a, and dra'a. *See* pic			
Duim	Netherlands	0.3937 inches.	0.01000
Duime	Russia	1.00000 "	0.02540
El	Netherlands	39.37079 "	1.00000
Ell	England	45.0000 "	1.14209
"	Scotland	37.0600 "	0.94131
Elle	Austria	30.6758 "	0.77915
"	Baden	23.6225 "	0.60000
"	Bavaria	32.2235 "	0.81847
	Bremen	22.772 "	0.57833
"	Brunswick	22.470 "	0.57073
"	Hamburg	22.540 "	0.57251
"	Hanover	22.992 "	0.58398
"	Hesse-Cassel	22.434 "	0.56981
"	Hesse-Darmstadt	31.4966 "	0.80000
"	Lübeck	22.670 "	0.57581
"	Prague	23.200 "	0.58927
"	Prussia	26.2586 "	0.66696

MEASURES.	Locality.	Feet or Inches.	Metres.
Elle	Saxony	22.296 inches.	0.56631
"	Stuttgart	24.180 "	0.61416
Endaseh	Smyrna	24.65 "	0.62610
"	Roumania	26.08 "	0.66242
"	Turkey	25.70 "	0.65227
Estadal	Spain	11.128 feet.	3.39275
Etto	Sumatra	18.0000 inches.	0.45719
Famn	Norway	70.1424 "	1.78158
Fan	China	0.13125 "	0.00333
Fathom	Great Britain	6. "	1.82877
Favn	Denmark	74.148 inches.	1.88331
Feldfuss. *See* fuss			
Fod	Denmark	12.358 "	0.31389
Foot	Great Britain	12.000 "	0.30476
"	Malta	11.17 "	0.28371
"	United States	12.000 "	0.30476
Fot	Norway	11.6904 "	0.29693
"	Sweden	11.679 "	0.29664
Foute	Russia	12.0000 "	0.304761
Fuss	Austria	12.4456 "	0.316111
"	Baden	11.811 "	0.30000
"	Bavaria	11.490 "	0.29184
"	Bremen	11.386 "	0.28919
" Werkschuh	Frankfort	11.205 "	0.28460
" Feldfuss	"	14.006 "	0.35575
"	Hamburg	11.27 "	0.28626
"	Hanover	11.496 "	0.29199
" Waldfuss	Hesse-Cassel	11.324 "	0.28763
"	Hesse-Darmstadt	9.8427 "	0.25000
"	Lübeck	11.335 "	0.28790
"	Prague	11.880 "	0.30174
" Rheinfuss	Prussia	12.357 "	0.31386
"	Saxony	11.148 "	0.28316
"	Würtemberg	11.260 "	0.28599
Gez. *See* guz			
Gheriah	Bengal	2.25 "	0.05715
Goess. *See* guz			
Gon	Annam	639.498 feet.	194.91606
Grao	Portugal	0.1803 inch.	0.00458
Guerze, or gueza	Ispahan	37.39 inches.	0.94969
Guirah	Turkey	1.6062 "	0.04077
Gujah. *See* guz			
Guz, or goess	Afghanistan	45.6700 "	1.16
" " gez	Bengal	36.0000 "	0.91438
"	Bombay	27.1800 "	0.69036
"	Gujerat	23.3334 "	0.59266
"	Mocha	24.9998 "	0.63498
" or gujah	Mysore	38.2000 "	0.97026
Hailoh	Sumatra	36.0000 "	0.91438
Hand	Great Britain	4.0000 "	0.10160
Hasch	Turkestan	28.0000 "	0.71119
Hasta. *See* covid			
Hatt	Turkey	0.1025 "	0.00260
Haut, or hath. *See* also covid	Masulipatan	19.1250 "	0.48577
"	Mysore	19.1000 "	0.48513
Hectometre	France, etc	326.0899 feet.	100.00000
Inc	Japan	6.25 "	1.90624

MEASURES.	Locality.	Feet or Inches.	Metres.
Inch	Great Britain	1.0000 inch.	0.02540
Jaktan	Guinea	12.0000 feet.	3.65753
Jankal	Sumatra	9.0000 inches.	0.22859
Jaob	Bengal	0.250 "	0.00635
Jarda Ionia	Ionian Isles	36.0000 "	0.91433
Jow	Bengal	0.250 "	0.00635
Jumba	Singapore	14.400 "	0.36575
Kassaba	Mocha	12.300 feet.	3.74897
Ken	Siam	37.836 inches.	0.96101
Khalebi, for woolens	Roumania	26.43 "	0.67131
Kilometre	France	3280.899 feet.	1000.00000
Klafter	Austria	6.22278 "	1.89667
"	Baden	5.9056 "	1.80000
"	Bavaria	5.765 "	1.75104
"	Bremen	5.693 "	1.73514
"	Hesse-Darmstadt	8.202 "	2.50000
"	Würtemberg	5.63 "	1.71599
Kole	Travancore	29.065 inches.	0.73824
Kot. For silk and linen	Roumania	24.86 "	0.63143
Ligne	Switzerland	0.11811 "	0.00300
Line	Great Britain	0.08333 "	0.00212
Linea	Spain	0.07728 "	0.00197
Linha	Portugal	0.09016 "	0.00229
Linia	Russia	0.08333 "	0.00212
Linie	Austria	0.08643 "	0.00219
"	Denmark	0.0855 "	0.00218
"	Norway	0.08118 "	0.00206
"	Sweden	0.1168 "	0.00297
Link	Great Britain	8.0000 "	0.20319
Ly	Annam	0.02558 "	0.00065
Mau	"	239.75 feet.	73.07448
Metre	France	39.37079 inches	1.00000
Millimetre	"	0.039371 "	0.00100
Moot	Bengal	3.00000 "	0.07620
Nail	Great Britain	2.2500 "	0.05714
Ngu	Annam	7.9917 feet.	2.43583
Nocktat	Turkey	0.00854 inches.	0.00022
Ohra	Zanzibar	22.48 "	0.57098
Ouroub	Turkey	3.2125 "	0.08153
Palgat, or paulgaut	Birmah	1.0000 "	0.02540
Palm	Great Britain	3.00000 "	0.07620
"	Netherlands	3.937079 "	0.10000
Palma	Roumania	10.89 "	0.27660
Palmo	Argentine Confed.	8.5302 "	0.21666
"	Balearic Isles	7.697 "	0.19550
"	Genoa	8.9797 "	0.22809
"	Malta	10.3000 "	0.26162
"	Naples	10.381 "	0.26367
" da craveira	Portugal	8.656 "	0.21986
"	Rome	8.796 "	0.22349
"	Sicily	9.5297 "	0.24705
"	Spain	8.346 "	0.21199
"	Tuscany	11.49 "	0.29057
Parmack	Turkey	1.2303 "	0.03125
Perch. *See* rod	Great Britain	16.6667 feet.	5.07991
Perche	Switzerland	9.8426 "	3.00000
Phan. Cloth measure	Annam	0.2558 inch.	0.00649

MEASURES.	Locality.	Feet or Inches.	Metres.
Pic, or pik	Abyssinia	27.0000 inches.	0.68579
"	Aleppo	26.630 "	0.67639
"	Algeria	24.92 "	0.63296
"	Crete	25.09 "	0.63727
"	Cyprus	26.45 "	0.67182
"	Damascus	22.83 "	0.57987
" Nile	Egypt	9.0198 "	0.2545 ,
" native	"	22.3705 "	0.5682
" cloth	"	25.5083 "	0.0479
" builder's	"	29.5251 "	0.7500
" road	"	29.0911 "	0.7389
"	Morocco	26.0000 "	0.66039
"	Tripoli	26.42 "	0.67106
" for silk	Tunis	24.83 "	0.63067
Pie	Argentine Confed.	11.3736 "	0.28888
"	Canary Isles	11.126 "	0 28259
"	Spain	11.128 "	0.28265
Pié	Ancona	15.384 "	0.39075
" liprando	Genoa	20.228 "	0.51377
" manual	"	13.485 "	0.34251
"	Milan	15.61 "	0.39649
"	Modena	20.593 "	0.52305
"	Parma	22.428 "	0.56966
"	Rome	11.592 "	0.29443
"	Venice	13.69 "	0.34772
Pied	Switzerland	11.8112 "	0.30000
Piki	Greece	39.37079 "	1.00000
Pole. *See* rod	Great Britain	16.6667 feet.	5.07991
Pollegada	Portugal	1.082 inches.	0.02748
Ponto	"	0.0075 "	0.00019
Pouce	Switzerland	1.18112 "	0.03000
Punkt	Austria	0.00720 "	0.00018
Pulgada	Spain	0.9273 "	0.02355
Punto	"	0.0064 "	0.00017
Rahf	N. Madagascar	7.7433 feet.	2.36012
"	S. "	3.8716 "	1.18006
Ref	Sweden	97.325 "	29.66412
Rob, or robi	Algeria	3.115 inches.	0.07912
Rod, perch, or pole	Great Britain	16.6667 feet.	5.07991
Rode	Denmark	10.2983 "	3.13885
"	Norway	9.7420 "	2.96930
Roede	Netherlands	32.80899 "	10.00000
Ruthe	Austria	12.44556 "	3.79332
"	Baden	9.8427 "	3.00000
"	Bavaria	9.575 "	2.91841
"	Bremen	15.181 "	4.62704
"	Brunswick	14.980 "	4.56584
"	Frankfort	11.6717 "	3.55748
"	Hanover	15.328 "	4.67184
"	Hesse-Cassel	13.0865 "	3.98867
"	Prussia	12.357 "	3.76635
"	Saxony	14.865 "	4.53048
"	Würtemberg	9.3833 "	2.85999
Sachine, sagéne, or sashen	Russia	7.00000 "	2.13356
Sals	Japan	11.9291 inches.	0.30299
Sao	Annam	28.975 feet.	7.30745
Saundaung, or royal cubit	Birmah	22.0000 inches.	0.55878

MEASURES.	Locality.	Feet or Inches.	Metres.
Schuh	Brunswick	11.285 inches.	0.28536
Sesma	Spain	5.564 "	0.14132
Sok	Siam	18.918 "	0.48051
Span	Bengal	9.0000 "	0.22859
"	Great Britain	9.0000 "	0.22859
Stab. *See* metre	Germany	39.37079 "	1.00000
"	Hungary	62.2278 "	1.58055
Stadio	Ionian Isles	66.000 feet.	20.11644
Stadion. *See* kilometre	Greece	3280.899 "	1000.00000
Stang	Sweden	9.7325 "	2.96641
Streep	Netherlands	0.03937 inch.	0.00100
Strich	Germany	0.03937 "	0.00100
Tac	Annam	2.558 "	0.06497
Taim, or cubit	Birmah	18.0000 "	0.45719
Tchetverk	Russia	7.00000 "	0.17780
That	Annam	63.9498 feet.	19.49161
Thuoc	"	25.58 inches.	0.64972
Toise	Switzerland	11.8112 feet.	3.60000
Tomme	Denmark	1.02983 inches	0.02616
Trait	Switzerland	0.011811 "	0.00030
Truong	Annam	21.3166 feet.	6.49720
Tsun	China	1.3125 inches.	0.03334
Tum	Norway	0.9742 "	0.02474
"	Sweden	1.1679 "	0.02966
Tung	Sumatra	12.0000 feet.	3.65753
Unglee	Bengal	0.7500 inches.	0.01905
Vara	Argentine Confed.	34.1208 "	0.86664
"	Brazil	42.7961 "	1.08700
"	Central America	32.874 "	0.83498
"	Chili	33.367 "	0.84756
"	Cuba	33 375 "	0.84771
"	Curaçoa	33.375 "	0.84771
"	Mexico	32.9 "	0.83564
"	Peru	33.367 "	0.84756
"	Portugal	43.28 "	1.09928
"	Spain	33.384 "	0.84794
"	Venezuela	32.874 "	0.83498
Verschok	Russia	1.75000 "	0.04445
Vouah	Siam	6.306 feet.	1.92203
Waldfuss. *See* fuss	.....	.....	.....
Werkschuh. "	.....	.....	.....
Yan	China	109.375 "	33.3369
Yard	Great Britain	3.0000 "	0.91438
Zentimeter. *See* centimetre	Germany	0.3937 inch.	0.01000
Zoll	Austria	1.03718 "	0.02634
"	Baden	1.1811 "	0.03000
"	Bavaria	0.9575 "	0.02432
"	Bremen	0.9488 "	0.02409
"	Brunswick	0.9362 "	0.02378
"	Frankfort	0.93375 "	0.02372
"	Hamburg	0.9391 "	0.02385
"	Hanover	0.958 "	0.02433
"	Hesse-Cassel	0.9437 "	0.02397
"	Lübeck	0.9446 "	0.02399
"	Prussia	1.02975 "	0.02615
"	Saxony	0.9290 "	0.02359
"	Würtemberg	1.1260 "	0.02859

II.—ROAD MEASURES.

THE value of each unit is here given in English miles and French kilometres.

MEASURES.	Locality.	Miles.	Kilometres.
Baryd	Arabia	12.0000 (about).	19.311780
"	Egypt	13.776	22.169923
Coss	Bengal	1.1364	1.828826
"	Seringapatam	3.6458	5.867241
Dam	Annam	0.55 (about).	0.885123
Estadio	Portugal	0.1598	0.257168
Farsakh	Arabia	3.0000	4.827945
"	Egypt	3.444	5.542481
Furlong	Great Britain	0.125	0.201164
Gavada	Mysore	14.5833	23.469123
Grenzmiil	Norway	5.5352	8.91788
Hardary	Mysore	2.7344	4.40051
League	Great Britain	3.0000	4.827945
Legoa	Portugal	3.8358	6.172044
Legua	Argentine Confed.	0.3231	0.51997
"	Spain	4.2151	6.783424
Li	China	0.3457	0.55641
Lieue	Switzerland	2.9826	4.80000
Ly	Annam	0.275	0.442561
Meile	Austria	4.7142	7.586613
"	Baden	5.5234	8.88888
"	Bavaria	4.6143	7.42585
"	Bremen	3.9006	6.27729
"	Brunswick	6.7136	10.804297
"	Hamburg	4.6807	7.532721
"	Hanover	4.6086	7.416626
"	Lithuania	4.9958	8.039816
" post	Prussia	4.6807	7.532721
" "	Saxony	4.2227	6.79565
" polizei	"	5.6303	9.060872
Miglio	Lombardy	0.6214	1.00000
"	Naples	1.1469	1.845723
"	Sardinia	1.3835	2.226487
"	Tuscany	1.0277	1.65389
Mill	Denmark	4.6812	7.53352
"	Norway	6.6422	10.68939
Mijle	Netherlands	0.6214	1.00000
Mile	England	1.00000	1.609315
"	Ireland	1.27272	2.048219
"	Scotland	1.1250	1.810479
Milha	Portugal	1.2786	2.057348
Mili	Egypt	1.148	1.847494
Milla	Argentine Confed.	1.149	1.849103
Roënung	Siam	2.3886	3.84401
Taing or Dain	Birmah	2.4306	3.911601
Verst or Werst	Russia	0.6628	1.066654
Wegstunde	Baden	2.7617	4.44444

III.—SQUARE MEASURES.

THE value of each unit is here given in English square inches or square feet, and in square metres.

MEASURES.	Locality.	Feet or Inches.		Metres.
Square archine	Turkey	6.0549	feet.	0.5625
" aune	Switzerland	15.5006	"	1.4400
" centimetre	France, etc.	0.1550	inch.	0.0001
" chik. Mathematical	China	1.1959	feet.	0.1111
" decametre	France, etc.	1076.43	"	100.0000
" decimetre	"	15.5006	inches.	0.0100
" fod	Denmark	1.0605	foot.	0.09834
" foot	Great Britain	1.0000	"	0.09288
" fot	Norway	0.9484	"	0.08817
" "	Sweden	0.9472	"	0.08799
" foute	Russia	1.0000	"	0.09288
" fuss	Austria	1.0757	"	0.09993
" "	Baden	0.9688	"	0.09000
" "	Bavaria	0.9168	"	0.08517
" "	Bremen	0.9003	"	0.08362
" " (werkschuh)	Frankfort	0.8719	"	0.08099
" " (feldfuss)	"	1.3623	"	0.12656
" "	Hamburg	0.8820	"	0.08194
" "	Hanover	0.9178	"	0.08524
" "	Hesse-Cassel	0.8905	"	0.08273
" "	Hesse-Darmstadt	0.6728	"	0.06250
" "	Lübeck	0.8922	"	0.08289
" "	Prussia	1.0605	"	0.09834
" "	Saxony	0.8638	"	0.08018
" "	Würtemberg	0.8805	"	0.08184
" guz	Bengal	9.0000	"	0.88359
" klafter	Austria	38.7283	feet.	3.59732
" "	Baden	34.8763	"	3.24000
" "	Bavaria	33.2352	"	3.06614
" "	Würtemberg	31.6969	"	2.94465
" metre	France, etc.	10.7643	"	1.00000
" millimetre	" "	0.00155	inch.	0.000001
" palmo	Portugal	0.5206	foot.	0.06565
" "	Spain	0.4836	"	0.04494
" pie	"	0.8600	"	0.07989
" pie	Ancona	1.6435	"	0.15268
" " liprando	Genoa	2.8415	"	0.26396
" " manual	"	1.2628	"	0.11731
" "	Milan	1.6922	"	0.15721
" "	Modena	2.9449	"	0.27358
" "	Parma	3.4931	"	0.32456
" "	Rome	0.9331	"	0.08669
" "	Venice	1.3015	"	0.12091
" pied	Switzerland	0.9688	"	0.09000
" rod	Great Britain	266.6222	"	25.80538
" rode	Denmark	106.0549	"	9.85238
" "	Norway	94.9066	"	8.81674
" ruthe	Austria	154.8930	"	14.38912
" "	Baden	96.8787	"	9.00000
" "	Bavaria	91.6806	"	8.51712
" "	Bremen	230.4628	"	21.40913

MEASURES.	Locality.	Feet or Inches.	Metres.
Square ruthe.....	Brunswick.....	224.4004 feet.	20.84689
" "	Frankfort.....	136.2286 "	12.55545
" "	Hanover.....	234.9476 "	21.82572
" "	Hesse-Cassel.....	171.2565 "	15.90813
" "	Prussia.....	152.6954 "	14.18539
" "	Saxony.....	220.9682 "	20.52543
" "	Würtemberg.....	88.0465 "	8.17958
" sachine.....	Russia.....	49.0000 "	4.55108
" schuh.....	Brunswick.....	0.8766 "	0.08143
" vara.....	Argentine Confed.	8.0710 "	0.75106
" "	Brazil.....	12.6594 "	1.17603
" "	Central America.	7.5049 "	0.71720
" "	Chili.....	7.7315 "	0.71834
" "	Cuba.....	7.7354 "	0.71861
" "	Mexico.....	7.5165 "	0.69814
" "	Peru.....	7.7315 "	0.71834
" "	Portugal.....	13.0080 "	1.20846
" "	Spain.....	7.7395 "	0.71910
" "	Venezuela.....	7.5049 "	0.71720
" yard.....	Great Britain....	9.0000 "	0.83592
" zoll.....	Austria.....	1.0757 inch.	0.00069
" "	Baden.....	1.3950 "	0.00090
" "	Bavaria.....	0.9168 "	0.00059
" "	Bremen.....	0.9003 "	0.00058
" "	Brunswick.....	0.8766 "	0.00056
" "	Frankfort.....	0.8719 "	0.00056
" "	Hamburg.....	0.8820 "	0.00057
" "	Hanover.....	0.9178 "	0.00059
" "	Hesse-Cassel.....	0.8905 "	0.00057
" "	Lübeck.....	0.8922 "	0.00057
" "	Prussia.....	1.0605 "	0.00068
" "	Saxony.....	0.8638 "	0.00055
" "	Würtemberg.....	1.2679 "	0.00082

IV.—LAND MEASURES.

HERE the value of each measure is given in English acres and in French ares.

MEASURES.	Locality.	Acres.	Ares.
Acker.....	Hesse-Cassel.....	0.5897	23.8610
Acre..	Great Britain..	1.0000	40.4629
"	United States..	1.0000	40.4629
Ar.....	Germany.....	0.0247	1.0000
Are.....	France	0.0247	1.0000
Arpent.....	Lower Canada...	0.8449	34.1912
"	Switzerland.....	3.5588	144.0000

MEASURES.	Locality.	Acres.	Ares.
Biggah	Bengal	0.3306	13.3770
"	Bombay	0 6074	24.5772
Biolca	Modena	0.7009	28.3605
"	Parma	0.7528	30.4605
Bunder	Netherlands	2.4714	100.0000
Campo	Ven. Lombardy	0.6881	27.8425
Cawney, or casseney	Carnatic	1.0047	40.6531
" " "	Madras	1.3223	53.5042
Centare	France, etc	0.00025	0.0100
Chattack or chittack	Bengal	0.00103	0.0417
Cottah	"	0.0165	0.6676
Deciatina	Russia	2.6997	119.2498
Drohn	Hanover	0.4315	17.4597
Fanegada	Spain	1.5871	64.2188
Feddan	Egypt	1.0382	42.0084
Fjerding	Norway	0.15165	6.1342
Geira	Portugal	1.4287	57.8094
Giornata	Sardinia	0.9393	38.0068
Hectare	France	2.4714	100.0000
Hektar	Germany	2.4714	100.0000
Joch	Austria	1.4223	57.5505
Juchart. *See* morgen			
Kappland	Norway	0.03791	1.5339
Kerat	Egypt	0.04326	1.7504
Maoney	Madras	0.0551	2.2295
Mau	Annam	1.3201	53.4152
Moggio	Naples	0.8584	34.7334
Morgen	Baden	0.8897	36.0000
" juchart, or tagewerk	Bavaria	0.8416	34.0536
"	Bremen	0.6343	25.6656
"	Brunswick	0.6208	25.1194
"	Frankfort	0.5004	20.2476
"	Hamburg	2.3852	96.5123
" of Calenberg	Hanover	0.6472	26.1876
"	Hesse-Darmstadt	0.6178	24.9980
"	Prussia	0.6309	25.5281
"	Saxony	1.5216	61.5686
"	Würtemberg	0.7789	31.5166
Orlong	Malacca	1.3223	53.5042
Ref	Sweden	0.2175	8.8007
Rood	Great Britain	0.2500	10.1157
Rubbio	Rome	4.5658	184.7459
Saccato	Tuscany	1.3890	56.2031
Spannland	Norway	0.6066	24.5448
Staro	Parma	0.1255	5.0781
Strich	Bohemia	0.7111	28.7732
Tavola	Modena	0.00973	0.3937
"	Parma	0.01045	0.4228
Tondeland	Denmark	1.3635	55.1713
" or tunna	Norway	1.2132	49.0897
Tornatura	Ven. Lombardy	0.0247	1.0000
Vierkante roede	Netherlands	0.0247	1.0000
Viertel	Baden	0.2224	9.0000
"	Hesse-Darmstadt	0.1544	6.2474
Vorling	Hanover	0.3286	13.0988
Yugada	Spain	79.3550	3210.941

V.—CUBIC MEASURES.

THE following table is inserted merely to facilitate many calculations, and does not pretend to be even approximately complete. The value of each cube is given in English cubic feet or cubic inches, and in either cubic metres (m.), cubic decimetres (dm.), or cubic centimetres (cm.).

MEASURES.	Locality.	Feet or Inches.		Metric.	
Cubic archine	Turkey	14.8996	feet.	0.421875	m.
" centimetre	France, etc.	0.0610	inches.	1.00000	cm.
" chik (mathematical)	China	1.3084	feet.	13.70159	dm.
" decimetre	France, etc.	62.449	inches.	1.000	"
" fod	Denmark	1.0922	foot.	30.842	"
" foot	Great Britain	1.0000	"	28.307	"
" fot	Norway	0.9246	"	26.179	"
" "	Sweden	0.9219	"	26.103	"
" foute	Russia	1.0000	"	28.307	"
" fuss	Austria	1.1156	"	31.558	"
" "	Baden	0.9535	"	27.000	"
" "	Bavaria	0.8778	"	24.856	"
" "	Bremen	0.8542	"	24.185	"
" "	Frankfort	0.8141	"	23.052	"
" "	"	1.5899	"	45.020	"
" "	Hamburg	0.8284	"	23.458	"
" "	Hanover	0.8792	"	24.895	"
" "	Hesse-Cassel	0.8403	"	23.796	"
" "	Hesse-Darmstadt	0.5518	"	15.625	"
" "	Lübeck	0.8420	"	23.863	"
" "	Prussia	1.0919	"	30.911	"
" "	Saxony	0.8017	"	22.704	"
" "	Würtemberg	0.8261	"	23.391	"
" inch	Great Britain	1.0000	inch.	16.387	cm.
" metre	France, etc.	35.315	feet.	1.000	m.
" palmo	Portugal	648.56	inches.	10.628	dm.
" "	Spain	581.35	"	9.527	"
" pie	"	0.7974	feet.	22.581	"
" piè	Ancona	2.1070	"	59.662	"
" " liprando	Genoa	4.7838	"	135.520	"
" " manual	"	1.4191	"	40.181	"
" "	Milan	2.1970	"	62.235	"
" "	Modena	5.0537	"	143.090	"
" "	Parma	6.5287	"	184.860	"
" "	Rome	0.9015	"	25.524	"
" "	Venice	1.4848	"	42.043	"
" pied	Switzerland	0.9535	"	27.000	"
" schuh	Brunswick	0.8185	"	23.237	"
" yard	Great Britain	27.0000	"	0.764	m.
" zoll	Austria	1.1421	inches.	18.275	cm.
" "	Baden	1.6476	"	27.000	"
" "	Bavaria	0.8780	"	14.385	"
" "	Bremen	0.8541	"	13.980	"
" "	Brunswick	0.8206	"	13.447	"
" "	Frankfort	0.8140	"	13.346	"

MEASURES.	Locality.	Feet or Inches.	Metric.
Cubic zoll.....	Hamburg.....	0.8282 inch.	13.598 cm.
" "	Hanover.....	0.8792 "	14.402 "
" "	Hesse-Cassel.....	0.8404 "	13.772 "
" "	Lübeck.....	0.8428 "	13.807 "
" "	Prussia.....	1.0919 "	17.882 "
" "	Saxony.....	0.8017 "	13.128 "
" "	Würtemberg.....	1.4276 "	23.944 "

VI.—LIQUID MEASURES.

In this table the value of every measure is given in United States or Winchester quarts or gallons, in English imperial quarts or gallons, and in litres. The litre is a legal standard in the Argentine Confederation, Belgium, Brazil, Chili, Colombia, Ecuador, Egypt, France, Germany, Greece, Italy, Mexico, Netherlands, Spain, and the United States. After January 1, 1876, it will be the standard in Austria.

MEASURES.	Locality.	U. S. Measure.	English Measure.	Litres.
Ahm.....	Hamburg.....	38.1472 galls.	31.7735 galls.	144.3988
"	Hanover.....	41.4395 "	34.5156 "	156.8609
"	Lübeck.....	39.5738 "	32.1288 "	149.7986
Almud.....	Turkey.....	1.38086 "	1.1517 "	5.2269
Almude.....	Lisbon.....	4.3695 "	3.6394 "	16.5399
"	Oporto,.....	6.62558 "	5.5186 "	25.0788
Alquiére	Lisbon.....	2.18475 "	1.8197 "	8.2699
"	Oporto.....	3.31279 "	2.7593 "	12.5399
Amola.....	Genoa.....	0.1898 "	0.1589 "	0.7184
Anker.....	Bremen.....	9.5741 "	7.9744 "	36.2408
"	Denmark.....	9.9528 "	8.2898 "	37.6743
"	Hamburg.....	9.5368 "	7.9434 "	36.0996
"	Hanover.....	10.3599 "	8.6289 "	39.2158
"	Lübeck.....	9.8935 "	8.2405 "	37.4498
"	Prussia.....	9.0732 "	7.5572 "	34.3447
"	Saxony.....	17.1763 "	14.3064 "	65.0174
"	United States....	10.0000 "	8.3208 "	37.8523
Arroba.....	Cuba.....	4.100 "	3.4141 "	15.5197
" for wine...	Spain.....	4.26304 "	3.5507 "	16.1369
" for oil.....	"	3.31853 "	2.7640 "	12.5615
"	Venezuela	4.263 "	3.5507 "	16.1369
Azumbre.....	Spain..... ...	0.5329 "	0.4439 "	2.0172
Baril.....	Argentine Confed.	20.0768 "	16.7223 "	75.9966
"	Mexico.....	20.0000 "	16.6416 "	75.7046
Barile.....	Ionian Islands. .	19.2096 "	16.0000 "	72.7146

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Barile. For wine..	Malta.....	10.997 galls.	9.1505galls.	41.6259
" " "	Modena.....	11.0056 "	9.1667 "	41.6594
" " "	Naples	11.574 "	9.6402 "	43.8110
" " "	Rome	15.412 "	12.8369 "	58.3390
"	Sardinia.....	17 084 "	14.2295 "	64.6680
" For wine..	Tuscany.....	12.0444 "	10.0319 "	45.5916
Barique.....	Martinique.....	50.0000 "	41.6040 "	189.2615
Barrel. Beer.....	Great Britain....	43.2126 "	36.0000 "	163.5725
"	United States....	31.5000 "	26.2363 "	119.2369
Boccale	Modena.....	0.27514 "	0.2291 "	1.0415
" For wine..	Rome	0.4816 "	0.4011 "	1.8226
"	Sardinia.....	0.2067 "	0.1721 "	0.7824
"	Tuscany.....	0.3011 "	0.2508 "	1.1397
Bota. *See* pipa...	Portugal.....	113.631 "	94.6451 "	430.1272
Botta. For wine..	Naples.....	128.878 "	107.3446 "	487.8416
" " "	Rome.....	246.592 "	205.3906 "	933.4242
Butt. For wine...	Great Britain....	129.6648 "	108.0000 "	490.8199
" " beer....	" "	129.6648 "	108.0000 "	490.8199
Caffiso. " oil.....	Malta.....	5.499 "	4.5802 "	20.8153
Canada.....	Portugal.....	0.36412 "	0.3033 "	1.4783
Cantara.....	Central America.	4.2631 "	3.5508 "	16.1371
" *See* arroba	Spain.....	.....	.....	.....
Cantaro. " alquiére	Portugal.....	.....	.....	.....
Caraffa.....	Naples.....	0.77156 qts.	0.6427 qts.	0.73059
Carro.....	"	257.757 galls.	214.6901 galls.	975.687
"	Sardinia.....	148.822 "	123.9563 "	563.3356
Cass.....	Cyprus.....	1.25 "	1.4114 "	4.7316
Centillitre.....	France, etc.....	0.1057 qts.	0.0880 qts.	0.0100
Cohi.....	Siam	13.385 galls.	11.1486 galls.	50.6662
Copa.....	Spain.....	0.1332 qts.	0.1109 qts.	0.1274
Coppo.....	Ven. Lombardy..	1.0567 "	0.8802 "	0.1000
Corba.....	Roman States....	20.7617 galls.	17.2921 galls.	78.5892
Cuartilla	Central America..	1.0658 "	0.8877 "	4.0344
Cuartillo	Spain.....	0.5329 qts.	0.4439 qts.	0.5058
Cuba or kuba.....	Abyssinia.....	0.2684 galls.	0.2236 galls.	1.0159
Cuddy. *See* gudda.	Mocha.....	1.9990 "	1.665 "	7.5668
Decalitre.....	France, etc.....	2.6418 "	2.2004 "	10.0000
Decilitre.....	" "	0.1057 qts.	0.8802 qts.	0.1000
Dicotoli.....	Ionian Islands...	0.6003 "	0.5000 "	0.5684
Dreiling.....	Austria.....	358.86 galls.	298.9 galls.	1358.4
Eimer.....	"	14.9525 "	12.4583 "	56.5997
" For wine...	Bavaria.....	16.9444 "	14.1132 "	64.1396
"	Hamburg.....	7.6295 "	6.3547 "	28.8799
"	Hanover.....	16.5758 "	13 8062 "	62.7443
"	Lübeck.....	7.9147 "	6.5923 "	29.9595
"	Prague.....	16.1387 "	13.4416 "	61.0898
"	Prussia.....	18.1464 "	15.1144 "	68.6895
"	Saxony.....	20.0384 "	16.6903 "	75.8513
"	Würtemberg.....	77.6494 "	64.6755 "	293.93
Fass. Beer.....	Brunswick.....	106.7045 "	88.8756 "	403.91
"	German Empire..	26.418 "	22.004 "	100.00
"	Hanover.....	107.7430 "	89.7409 "	407.84
"	Hungary	52.5450 "	43.7656 "	198.9
"	Prague.....	64.5598 "	53.7729 "	244.38
"	Saxony.....	100.1737 "	83.4364 "	379.187
Ferren.....	Muscat.....	7.9254 "	6.6012 "	30.0000
Fiasco	Modena.....	2.2011 qts.	1.8333 qts.	2.0842

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Fiasco	Tuscany	2.4089 qts.	2.0064 qts.	2.2809
Firkin	Great Britain	10.8054 galls.	9.0000 galls.	40.0166
Fluid-drachm	United States	0.0039 qts.	0.00325 qts.	0.0037
" ounce	" "	0.03125 "	0.02603 "	0.0296
Foglietta	Roman States	0.4816 "	0.4011 "	0.4560
Frasco	Argentine Confed.	2.5096 "	2.0903 "	2.3749
"	Mexico	2.500 "	2.0823 "	2.3672
Fuder	Austria	478.479 galls.	398.533 galls.	1811.19
"	Baden	396.27 "	330 06 "	1500.00
"	Bremen	229.779 "	191.387 "	869.78
"	Brunswick	237.121 "	197.501 "	897.57
"	Frankfort	227.346 "	189.360 "	860.06
"	Hamburg	228.884 "	190.641 "	866.39
"	Hanover	248.638 "	207.095 "	941.17
"	Hesse-Cassel	251.524 "	209.499 "	952.09
"	Hesse-Darmstadt	253.613 "	211.238 "	960.00
"	Lübeck	237.448 "	197.768 "	898.80
"	Prussia	217.788 "	181.399 "	824.39
"	Saxony	240.461 "	200.284 "	910.22
"	Würtemberg	465.904 "	209.499 "	1763.58
Gallon. Beer meas.	United States	1.2251 "	1.0204 "	4.6400
" Winchester.	" "	1.0000 "	0.8329 "	3.7853
" Imperial	Great Britain	1.2006 "	1.0000 "	4.5435
Gill	" "	0.1501 qts.	0.125 qts.	0.1421
" Winchester	United States	0.125 "	0.1041 "	0.1184
Glas	Baden	0.1585 "	0.1320 "	0.1500
Gonghau	Japan	2.2191 galls.	1.8483 galls.	8.4000
Gudda or cuddy	Mocha	1.9990 "	1.665 "	7.5668
Guirbeh	Egypt	17.6117 "	14.6685 "	66.6655
Hectolitre	France, etc	26.418 "	22.004 "	100 000
Hogshead. Beer	Great Britain	64.8324 "	54.0000 "	245.410
" Wine	" "	64 8324 "	54.0000 "	245.410
"	United States	63.0000 "	52.4737 "	238.474
Ischiomassé	Japan	4.4382 "	3.6967 "	16.8000
Itchigau	"	1.7752 qts.	1.4786 qts.	1.6800
Ittomassé	"	44.3822 galls.	36.9667 galls.	168.4000
Jungfru	Norway	0.0864 qts.	0.0720 qts.	0.0818
Kan	Netherlands	1.0567 "	0.8802 "	1.0000
Kande	Denmark	2.0416 "	1.7005 "	1.9332
Kanna	Norway	2.7642 "	2.3023 "	2.6174
"	Sweden	2.7656 "	2.3035 "	2.6172
Kanne	Austria	0.7477 "	0.6228 "	0.7079
"	German Empire	1.0567 "	0.8802 "	1.0000
"	Hamburg	1.9074 "	1.5887 "	1.8061
"	Hanover	2.0720 "	1.7258 "	1.9620
"	Java	1.5760 "	1.3127 "	1.4914
"	Lübeck	1.9787 "	1.6489 "	1.8737
"	Saxony	1.2723 "	1.0597 "	1.2047
Khoulle	Algeria	4.4027 galls.	3.6671 galls.	16.6655
Kilderkin	Great Britain	21.6108 "	18.0000 "	81.8033
Kilolitre	France, etc	264.18 "	220.04 "	1000.0000
Kop	China	0.0550 qts.	0.0458 qts.	0.0521
Kuba or cuba	Abyssinia	1.0736 "	0.8942 "	1.0166
Legger. For arrack	Java	160.0000 galls.	133.267 galls.	605.65
Litre	France, etc	1.0567 qts.	0.8802 qts.	1.0000
Maatje	Netherlands	0.1057 "	0.0880 "	0.1000
Mass	Austria	1.4954 "	1.2455 "	1.4149

MEASURES.	Locality.	United States Measure.	Englis'h Measure.	Litres.
Mass.....	Baden.....	1.585 qts.	1.320 qts.	1.5000
" For beer.....	Bavaria.....	1.1296 "	0.9408 "	1.0696
" Eichmass....	Frankfort.....	1.8945 "	1.5779 "	1.7939
" Neumass.....	"	1.6844 "	1.4029 "	1.5949
" For wine.....	Hesse-Cassel.....	2.0969 "	1.7465 "	1.9855
"	Hesse-Darmstadt.	2,1134 "	1.7604 "	2 0000
"	Würtemberg.....	1.9412 "	1.6168 "	1.8383
Mataro. For oil...	Tripoli.....	6.1630 galls.	5.1333 galls.	23.3288
Metter or mitre....	Tunis	2.6417 "	2.2008 "	9.9996
Mezzaruola.....	Sardinia.....	34.1680 "	28.4591 "	129.3366
Mezzetta.....	Tuscany.....	0.60212 qts.	0 5015 qts.	0.5701
Millilitre.....	France, etc.....	0.00106 "	0.00088 "	0.0010
Mina.....	Ven. Lombardy..	2.6418 galls.	2.2004 galls.	10.0000
Mingel.....	Bremen.....	0.2131 qts.	0.1776 qts.	0.2018
Mistate.....	Crete.....	2.948 galls.	2.4505 galls.	11.1590
Misurella. For oil.	Naples.....	0.1114 qts.	0 0928 qts.	0.1055
Muid.....	Switzerland.....	39.627 galls.	33.006 galls.	150.0000
Nössel.....	Brunswick.....	0.4940 qts.	0.4115 qts.	0.4678
"	Hanover.....	0.5180 "	0.4314 "	0.4905
"	Saxony.....	0.6362 "	0.5549 "	0.6024
Noosfiah or nusfiah	Mocha.....	0.9997 "	0.8851 "	0.9466
Oessel.....	Hamburg.....	0.4768 "	0.3971 "	0.4515
"	Prussia.....	0.6049 "	0.5038 "	0.5728
Ohm. (Compare *ahm.*).....	Baden.....	39.627 galls.	33.006 galls.	150.0000
"	Bremen.....	38 2965 "	31.8969 "	144.9637
"	Brunswick.....	39.5202 "	32.917 "	149.5958
"	Frankfort.....	37.8910 "	31.560 "	143.4287
" For beer.....	Hesse-Cassel.....	46.1333 "	38.425 "	174.6283
"	Hesse-Darmstadt.	42.2688 "	35.2064 "	160.0000
"	Prussia.....	36.2928 "	30.229 "	137.3790
"	Saxony.....	40.0806 "	33.383 "	151.717
Oka.....	Roumania.....	1.4974 qts.	1.2472 qts.	1.4179
Oke.....	Crete.....	1.3832 "	1.1521 "	1.3097
Ort.....	Lübeck.....	0.2475 "	0.2061 "	0.2334
Oxhoft	Bremen.....	57.4448 galls.	47.8467 galls.	227.446
"	Brunswick.....	59.2802 "	49.3755 "	224.394
"	Hamburg.....	57.2210 "	47 6603 "	216.598
"	Hanover.....	62.1593 "	51.7735 "	235.291
"	Lübeck.....	59.3608 "	49.4426 "	224.698
"	Saxony.....	60.1158 "	50.0710 "	227.554
Pakha.....	Sumatra.....	0.5814 qts.	0.4843 qts.	0.5600
Panilla.....	Spain.....	0.1327 "	0.1105 "	0.1256
Parrah.....	Ceylon.....	6.75 galls.	5.6222 galls.	25.5507
Pfiff.....	Austria.....	0.1869 qts.	0.1557 qts.	0.1770
Pint. Imperial....	Great Britain....	0.6003 "	0.5000 "	0.5679
" Winchester..	United States....	0.5000 "	0.4164 "	0.4734
Pinta	Sardinia. Turin..	1.6536 "	1.3773 "	1.5658
"	Ven. Lombardy..	1.0567 "	0.8802 "	1.0000
Pipa. For wine...	Madeira.....	110.0000 galls.	91.621 galls.	416.883
"	Portugal.....	56.8035 "	47.3126 "	215.018
Pipe.....	Great Britain....	129.665 "	108.0000 "	490.82
"	United States....	126.0000 "	104.9475 "	476.95
Planke.....	Lübeck.....	0.4950 qts.	0.4123 qts.	0.4687
Poegel	Denmark.....	0.2552 "	0.2126 "	0.2416
Pot.....	"	1.0208 "	0.8502 "	0.9666
"	Switzerland.....	1.585 "	1.320 "	1.5000

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Puncheon	Great Britain	129.665 galls.	108.0000 galls.	490.82
"	United States	84.0000 "	69.97 "	317.965
Quart. Beer meas.	Great Britain	1.2251 qts.	1.0204 qts.	1.1600
" Imperial	" "	1.2006 "	1.0000 "	1.1358
" Winchester	United States	1.0000 "	0.8329 "	0.9469
Quarter	Norway	0.8455 "	0.2878 "	0.3271
Quarterone	Roman States	5.1904 galls.	4.3232 galls.	19.6467
Quartier	Bremen	0.8524 qt.	0.7099 qt.	0.8071
"	Brunswick	0.9880 "	0.8229 "	0.9355
"	Hamburg	0.9536 "	0.7942 "	0.9029
"	Hanover	1.0360 "	0.8629 "	0.9810
"	Lübeck	0.9900 "	0.8246 "	0.9374
"	Prussia	1.2098 "	1.0077 "	1.1455
"	Saxony	0.51904 "	0 4323 "	0.4914
Quartilho	Portugal	0.3641 "	0.3032 "	0.3448
Quartillo	Chili	1.1624 "	0.9682 "	1.1007
"	Spain	0.5329 "	0.4438 "	0.4946
Quartino	Sardinia	0.4134 "	0.3443 "	0.3914
Quarto. For oil	Naples	0.6541 "	0.5448 "	0.6194
Quartuccio. Wine	Roman States	0.1204 "	0.1003 "	0.1140
"	Tuscany	0.3011 "	0.2508 "	0.2851
Rubbio	Piedmont	2.4804 galls.	2.0659 galls.	9.3883
Runlet	United States	18.0000 "	14.9925 "	68.1341
Salma	Sicily	22.0000 "	18.3242 "	83.2766
Schoppen	Frankfort	0.4736 qt.	0.3945 qt.	0.4484
"	German Empire	0.5284 "	0.4401 "	0.5000
"	Hesse-Cassel	0.5242 "	0.4366 "	0.4964
"	Hesse-Darmstadt	0.5284 "	0.4401 "	0.5000
"	Würtemberg	0.4853 "	0.4042 "	0.4595
Seer	Ceylon	1.2000 "	0.9995 "	1.1363
Seidel	Austria	0.3738 "	0.3113 "	0.3539
"	Prague	0.5044 "	0.4201 "	0.4776
Setier	Switzerland	9.9067 galls.	8.2515 galls.	37.5000
Shing-tsong	China	0.55 qt.	0.4581 qt.	0.5407
Sidio	Muscat	0.9824 "	0.7766 "	0.8829
Soma	Roman States	43.386 galls.	36.137 galls.	164.225
" For oil	Tuscany	19.271 "	16.0511 "	72.9464
"	Ven. Lombardy	26.418 "	22.004 "	100.0000
Stajo. For oil	Naples	2.6163 "	2.1791 "	9.9035
Stop	Norway	1.3821 qts.	1.1512 qts.	1.3087
Stübchen	Bremen	3.4096 "	2.8399 "	3.2285
"	Brunswick	3.9520 "	3.2917 "	3.7421
"	Hamburg	3.8147 "	3.1773 "	3.6121
"	Hanover	4.1439 "	3.4515 "	3.9328
"	Lübeck	3.9574 "	3.2962 "	3.7473
Stütz	Baden	3.9627 galls.	3.3006 galls.	15.0000
Tau	China	1.125 "	0.937 "	4.2585
Tierce	Great Britain	43.2216 "	36.0000 "	163.606
"	United States	42.0000 "	34.982 "	158.98
Tonelada	Portugal	113.607 "	94.6252 "	429.998
Tönde. Of beer	Denmark	34 7072 "	28.9082 "	131.377
" " tar	"	30.624 "	25.5072 "	115.9209
Tonne	Brunswick	26.676 "	22.2189 "	100.9766
"	Hamburg	45.7771 "	38.1285 "	173.279
"	Hanover	41.2646 "	34.3708 "	156.1609
Tun	Great Britain	259.33 "	216.0000 "	981.641
"	United States	252.0000 "	209.895 "	953.895

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Tunna	Norway	33.1709 galls.	27.6286 galls.	125.562
Vakia	Mocha	0.0624 qt.	0.05197 qt.	0.0591
Vat	Netherlands	26.418 galls.	22.004 galls.	100.0000
Vedro	Russia	3.249 "	2.7061 "	12.2990
Viadra	Roumania	3.7434 "	3.1179 "	14.1699
Viertel	Austria	3.7381 "	3.1135 "	14.1498
"	Bremen	1.9148 "	1.5949 "	7.2102
"	Frankfort	1.8945 "	1.5771 "	7.1712
"	Hamburg	1.9074 "	1.5887 "	7.2208
"	Hanover	2.0719 "	1.7257 "	7.8428
"	Hesse-Cassel	2.0969 "	1.7465 "	7.9374
"	Hesse-Darmstadt	2.1134 "	1.7603 "	8.0000
"	Lübeck	1.9787 "	1.6481 "	7.4899
Vingerhœd	Netherlands	0.0106 qt.	0.0088 qt.	0.0100

VII.—DRY MEASURES.

THE value of every unit is here given in British or imperial bushels or pecks, United States or "Winchester" bushels or pecks, and litres. For the list of countries in which the litre is recognized, *see* the note at the head of the Liquid-Measure table:

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Achtel	Austria	0.8726 peck.	0.8459 peck.	7.6868
" *See* massel	Bavaria	.....	.....	.....
" " malter	Frankfort	.....	.....	.....
"	Würtemberg	0.3143 peck.	0.3047 peck.	3.6496
Adoulie	Bombay	0.7813 "	0.7574 "	6.8825
Almude	Spain	0.5330 "	0.5167 "	4.6592
Alquiere	Brazil	1.13512 bu.	1.1004 bush.	39.9965
"	Portugal	1.5347 peck.	1.4878 peck.	13.5192
Amomam	Ceylon	5.7757 bush.	5.5993 bush.	20.9924
Ardeb	Egypt	2.603 "	2.5235 "	91.7196
"	Gondar	0.4586 peck.	0.4446 peck.	4.0398
"	Massowah	1.3333 "	1.2926 "	11.7458
Artaba	Persia	1.8514 bush.	1.7948 bush.	65.2361
Bambou	Bantam	0.3689 peck.	0.3576 peck.	3.2396
"	Madagascar	0.2272 "	0.2203 "	2.0014
Becher	Austria	0.0544 "	0.0527 "	0.4792
"	Baden	0.0170 "	0.0164 "	0.1500
" or löcher	Brunswick	0.2167 "	0.2101 "	1.9089
Bushel, Imperial	Great Britain	1.0315 bush.	1.0000 bush.	36.3460
" Winchester	United States	1.0000 "	0.9694 "	35.2361
Caffiso or cafiz	Algeria	9.0072 "	8.7321 "	317.38
" " "	Tunis	14.0753 "	13.6454 "	495.96
Cahiz	Spain	19.1897 "	18.6037 "	676.20
Candaca	Mysore	11.13 "	10 79 "	392.13

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Candy	Bombay	25.00 bush.	24.2350 bush.	880.9
Capicha	Persia	2.9622 peck.	2.8716 peck.	26.1292
Carga	Crete	4.32311 bu.	4.1911 bush.	152.329
Carro	Naples	56.3258 "	54.6057 "	1984.7
Centilitre	France, etc	0.00135 pk.	0.0011 peck.	0.0100
Chattack	Bengal	0.0015 "	0.0014 "	0.0132
Chenica	Persia	0.14812 "	0.1436 "	1.3048
Chilo	Ionian Isles	1.0315 bush.	1.0000 bush.	36.3460
Chinik	Turkey	1.00075 pk.	0.9702 peck.	8.8156
Chundoo	Ceylon	0.03125 "	0.0307 "	0.2753
Cohi	Siam	13.3848 bush.	12.9760 bush.	471.162
Collothun	Persia	0.9257 peck.	0.8974 peck.	8.1545
Coomb	Great Britain	4.1260 bush.	4.0000 bush.	145.384
Corba	Bologna	2.232 "	2.1541 "	78.6347
Cuartilla	Central America	1.5745 peck.	1.5264 peck.	13.8698
Decalitre	France, etc	1.1352 "	1.1005 "	10.0000
Decilitre	"	0.0135 "	0.0110 "	0.1000
Djezla	Zanzibar	7.305 bush.	7.0819 bush.	257.4
Dreissiger	Bavaria	0.1316 peck.	0.1276 peck.	1.1593
Drittel	Hanover	1.1790 "	1.1430 "	10.3858
Drömt	Lübeck	12.1164 bush.	11.7464 bush.	426.98
Ecklein	Würtemberg	0.0078 peck.	0.0075 peck.	0.0687
Emine	Switzerland	0.1703 "	0.1651 "	1.5000
Fanega	Argentine Confed.	3.8936 bush.	3.7747 bush.	137.19
"	Central America	1.5745 "	1.5264 "	55.479
"	Chili	2.575 "	2.4963 "	90.733
"	Cuba	3.1237 "	3.0288 "	110.067
"	Mexico	1.55 "	1.5026 "	54.6159
"	Spain	1.599 "	1.5502 "	56.3425
"	Uruguay	7.776 "	7.5385 "	274.0
Fanga	Lisbon	1.5347 "	1.4878 bush.	54.0768
"	Oporto	1.9374 "	1.8782 "	62.2668
Fass	Hamburg	1.4941 "	1.4484 "	52.6462
"	Lübeck	1.0097 peck.	0.9778 peck.	8.8944
Fjerding	Norway	2.0786 "	2.0151 "	18.3104
Fjerdingkar	Denmark	0.9869 "	0.9567 "	8.6936
Fortin	Turkey	4.0030 bush.	3.8807 bush.	141.05
Gantang	Borneo	2.9513 peck.	2.8612 peck.	25.998
Garce	Madras	139.535 bush.	135.274 bush.	4916.66
"	Pondicherry	103.967 "	100.792 "	3663.39
Garnetz	Russia	0.8923 peck.	0.8803 peck.	8.4558
Gombetta	Genoa	1.4274 "	1.3838 "	12.5739
Gonghau	Japan	0.9547 "	0.9256 "	8.4000
Grosses massel	Austria	0.2181 "	0.2114 "	1.9212
Halvotting	Denmark	0.2467 "	0.2392 "	2.1732
Hectolitre	France, etc	2.838 bush.	2.7512 bush.	100.0000
Himt	Brunswick	3.4669 peck.	3.3610 peck.	30.5399
"	Hamburg	2.9881 "	2.8968 "	26.3222
"	Hanover	3.5371 "	3.4291 "	31.1588
"	Hesse-Cassel	4.5615 "	4.4222 "	40.1822
Ischiomassé	Japan	1.9095 "	1.8512 "	16.8000
Itchigau	"	0.1909 "	0.1851 "	1.6800
Ittomassé	"	4.7738 bush.	4.6280 bush.	168.00
Kaddah	Egypt	0.2169 peck.	0.2103 peck.	1.9104
Kahoon	Bengal	42.44 bush.	41.144 bush.	1495.42
Kanna	Norway	0.2969 peck.	0.2878 peck.	2.6154
"	Sweden	2.9712 "	2.8804 "	26.1719

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Kélé	Egypt	0.8685 peck.	0.8419 peck.	7.6506
Kella. *See* mecmeda	Mocha			
Kérat	Egypt	0.0068 "	0.0066 "	0.0599
Kharroubah	"	0.0136 "	0.0132 "	0.1193
Khoonke	Bengal	0.0073 "	0.0071 "	0.0643
Kilo	Roumania	12.345 bush.	11.968 bush.	434.98
"	Turkey	1.00075 "	0.9702 "	35.2624
Kilolitre, or stere	France, etc	28.38 "	27.5121 "	1000.00
Kleines massel	Austria	0.1090 peck.	0.1057 peck.	0.9602
Koolah	Sumatra	0.4692 "	0.4548 "	4.1332
Kop	China	0.0087 "	0.0084 "	0.0766
"	Netherlands	0.1135 "	0.1105 "	1.00
Koyang	Bantam	147.566 bush.	143.059 bush.	5199.64
"	Batavia	62.432 "	60.525 "	2199.85
"	The Moluccas	55.3371 "	53.647 "	1949.86
Kümpf	Hesse-Darmstadt	0.9082 peck.	0.8804 peck.	8.00
Last	Bremen	84.0779 bush.	81.5103 bush.	2962.57
"	Great Britain	82.5200 "	80.0000 "	2907.68
"	Hamburg	89.6433 "	86.9057 "	3158.68
"	Hanover	84.8894 "	82.2970 "	2991.17
"	Lübeck	96.9312 "	93.9710 "	3415.46
"	Netherlands	85.14 "	82.54 "	3000.00
"	Prussia	112.2917 "	108.8624 "	3956.72
Lastre	Argentine Confed.	58.4040 "	56.6204 "	2057.92
Litre	France, etc	0.1135 peck.	0.1105 peck.	1.0000
Maatje	Netherlands	0.0113 "	0.0110 "	0.1000
Madega	Abyssinia	0.0459 "	0.0445 "	0.4043
Mässchen	Frankfort	0.0509 "	0.0493 "	0.4484
"	Hesse-Cassel	0.2876 "	0.2788 "	2.5335
"	Hesse-Darmstadt	0.0567 "	0.0550 "	0.5000
"	Prussia	0.0975 "	0.0945 "	0.8589
"	Saxony	0.1843 "	0.1786 "	1.6235
Mässlein	Baden	0.1703 "	0.1651 "	1.5000
"	Bavaria	0.2632 "	0.2551 "	2.3185
"	Würtemberg	0.1572 "	0.1524 "	1.3848
Malouah	Egypt	0.4337 "	0.4204 "	3.8205
Malter	Baden	4.2570 bush.	4.1268 bush.	150.0000
"	Frankfort	3.25626 "	3.1568 "	114.7878
"	Hanover	5.30559 "	5.1434 "	186.948
"	Hesse-Darmstadt	3.6326 "	3.5216 "	128.000
"	Prussia	18.7164 "	18.1448 "	659.492
"	Saxony	35.3820 "	34.3050 "	1246.7
Maquia	Portugal	0.0959 peck.	0.0929 peck.	0.8448
Marcal	Madras	1.35936 "	1.3178 "	11.9749
"	Masulipatan	1.612 "	1.5628 "	14.2001
Massel or achtel	Bavaria	0.5264 "	0.5103 "	4.6371
"	Prague	0.6640 "	0.6437 "	5.8492
Medinno	Cyprus	2.1312 bush.	2.0661 bush.	75.0951
Medio	Spain	0.2664 peck.	0.2534 peck.	2.3467
Metze	Austria	1.7451 bush.	1.6918 bush.	61.4904
"	Bavaria	4.2067 peck.	4.0782 peck.	37.0568
"	Frankfort	1.6281 "	1.5784 "	14.3419
"	Hesse-Cassel	1.1500 "	1.1149 "	10.1304
"	Hungary	1.7735 bush.	1.7193 bush.	62.4912
"	Prussia	0.3899 peck.	0.3779 peck.	3.4346
"	Saxony	0.7371 "	0.7146 "	6.4931
Mina	Parma	0.6670 bush.	0.6466 bush.	23.5025

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Mina	Sardinia	3.4257 bush.	3.3211 bush.	120.708
"	Turin	0.6527 "	0.6328 "	22.9986
"	Tuscany	1.6590 peck.	1.6083 peck.	14.6141
"	Ven. Lombardy	1.1352 "	1.1005 "	10.0000
Minot. Old measure	Lower Canada	1.1111 bush.	1.0772 bush.	39.1508
Misura	Naples	0.2607 peck.	0.2527 peck.	2.2965
Moggio	Tuscany	16.5904 bush.	16.0837 bush.	584.58
Moio	Portugal	23.0202 "	22.3172 "	811.141
Mudde	Netherlands	2.838 "	2.7512 "	100.000
Mudi	Mangalore	1.3019 "	1.2621 "	45.874
Muhd	Morocco	5.1840 "	5.0257 "	182.663
Müller-massel	Austria	0.4362 peck.	0.4229 peck.	3.8425
Muth	"	52.3536 bush.	50.7548 bush.	1844.73
Ochavillo	Spain	0.0084 peck.	0.0081 peck.	0.0740
Olluck	Madras	0.0217 "	0.0210 "	0.1912
Orbah	Tripoli	0.7613 "	0.7381 "	6.7063
Ort	Norway	0.0093 "	0.0090 "	0.0819
Osmina	Russia	2.9784 bush.	2.8874 bush.	104.95
Ottingkar	Denmark	0.9869 peck.	0.9567 peck.	8.6936
Ouebeh	Egypt	1.4020 "	1.3592 "	12.3502
" or ueba	Tripoli	3.0452 bush.	2.9522 bush.	107.30
Outava	Portugal	0.1918 peck.	0.1859 peck.	1.6896
Pajak	Russia	1.4892 bush.	1.4437 bush.	52.4735
Pallie	Bengal	0.4676 peck.	0.4533 peck.	4.1191
Parah	Bombay	3.125 bush.	3.0295 bush.	110.113
" or chunam	Madras	1.7442 "	1.6909 "	51.4515
Peck. Imperial	Great Britain	1.0315 peck.	1.0000 peck.	9.0865
" Winchester.	United States	1.0000 "	0.9694 "	8.8090
Puddy	Madras	0.1744 "	0 1691 "	1.5363
Quarta	Rome	2.0887 bush.	2.0249 bush.	73.5976
Quarter	Great Britain	8.2520 "	8.0000 "	290.8
"	Norway	0.0389 peck.	0.0377 peck.	0.3427
Quarterolo	Parma	0.3335 "	0.3233 "	2.9378
Quarterone	Bologna	1.1160 "	1.0819 "	9.8308
Quarticino	"	0.2790 "	0.2704 "	2.4577
Quartillo	Spain	0.1332 "	0.1291 "	1.1734
Quarto	Genoa	1.7129 "	1.6606 "	15.0889
"	Portugal	0.3886 "	0.3719 "	3.3791
Quartuccio	Rome	0.3798 "	0.3682 "	3.3457
Quateron	Switzerland	1.7028 "	1.6504 "	15.0000
Racion	Spain	0.0333 "	0.0323 "	0.2933
Raik	Bengal	0.1169 "	0.1133 "	1.0298
Roubouh or rob	Egypt	0.4339 "	0 4206 "	3.8222
Rubbio	Ancona	7 974 bush.	7.7305 "	280.972
"	Rome	8.355 "	8.0998 "	294.397
Saá	Algeria	1.3621 "	1.3205 "	47.9950
Sacco	Modena	3.9956 "	3.8736 "	140.789
"	Turin	3.2635 "	3.1638 bush.	114.992
"	Tuscany	2.0738 "	2.0104 "	73.0725
Salma	Malta	8.224 "	7.9728 "	289.781
" generale	Sicily	7.8 "	7.5618 "	274.841
" grosso	"	10.0 "	9.6946 "	353.26
Sat	Siam	0.3346 peck.	0.3244 peck.	2.9475
Scheepston	Netherlands	28.38 bush.	27.5121 bush.	1000.00
Scheffel	Bavaria	6.31002 "	6.1173 "	222.34
"	Bremen	2.10195 "	2.0377 "	74.0645
"	Brunswick	8.6672 "	8.4025 "	305.398

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Scheffel	German Empire	1.4190 bush.	1.3756 bush.	50.0000
"	Hamburg	2.9881 "	2.8968 "	105.2803
"	Hesse-Cassel	2.3 "	2.2297 "	81.25
" for wheat	Lübeck	1.0097 "	0.9788 "	35.5778
" " oats	"	1.1213 "	1.0871 "	39.5102
"	Prussia	1.5597 "	1.5121 "	54.9577
"	Saxony	2.9485 "	2.8584 "	103.8935
"	Würtemberg	5.0292 "	4.8756 "	117.2093
Schepel	Netherlands	1.1352 peck.	1.1005 peck.	10.00
Schrott	Frankfort	0.0127 "	0.0123 "	0.1119
Scorzo	Rome	1.5191 "	1.4727 "	13.3817
Sechter	Frankfort	0.8140 "	0.7891 "	7.1705
Sei	China	3.4716 bush.	3.3656 bush.	122.3256
Seidel	Prague	0.0554 peck.	0.0537 peck.	0.4880
Sester	Baden	1.7028 "	1.6504 "	15.0000
Sesti	Siam	1.3385 "	1.2975 "	11.7903
Sextario	Persia	0.0370 "	0.0358 "	0.3259
Shye	Anjar	3.5297 "	3.4219 "	31.0931
Simmer	Frankfort	3.2563 "	3.1568 "	28.6847
"	Hesse-Darmstadt	3.6326 "	3.5216 "	32.0000
Simri	Würtemberg	2.5146 "	2.4378 "	22.1511
Skoeppe	Denmark	1.9738 "	1.9135 "	17.3872
Soallee	Bengal	2.3378 bush.	2.2664 bush.	82.3749
Soma	Ven. Lombardy	2.8880 "	2.7512 "	100.0000
Span	Norway	2.0786 "	2.0151 "	73.2419
Spint	Bremen	0.5255 peck.	0.5094 peck.	4.6291
"	Hamburg	0.7470 "	0.7242 "	6.5803
Stajo	Bologna	1.1158 bush.	1.0817 bush.	39.3164
"	Modena	1.9978 "	1.9368 "	70.3946
"	Parma	1.3337 "	1.2929 "	46.9944
"	Turin	1.0878 "	1.0546 "	38.3298
"	Tuscany	0.6915 "	0.6704 "	24.3658
Starello	Rome	2.0888 peck.	2.0250 peck.	18.4002
Stop	Norway	0.1556 "	0.1508 "	1.3707
Strich	Prague	2.65618 bu.	2.5751 bush.	93.5905
Tarrie	Algeria	2.2518 peck.	2.1830 peck.	19.8371
Tau	China	0.8708 "	0.8442 "	7.6709
Tchetverik	Russia	2.9784 "	2.8874 "	26.2367
Tchetverka	"	0.7446 "	0.7219 "	6.5592
Tchetviert	"	5.9521 bush.	5.7703 "	209.728
Teman	Tripoli	3.0452 peck.	2.9528 "	26.8252
Tönde	Denmark	3.9477 bush.	3.8271 bush.	139.098
Tomolo	Naples	1.5646 "	1.5168 "	55.1303
Tonelada	Argentine Confed.	29.2020 "	28.3102 "	1029.3
Tonne	Lübeck	4.0388 "	3.9154 "	142.812
Tunna	Norway	4.1572 "	4.0302 "	146.488
Ueba or hueba	Tripoli	3.0452 "	2.9522 "	107.301
Vierfass	Hanover	0.8844 peck.	0.8574 peck.	7.7907
Viertel	Austria	1.7451 "	1.6918 "	15.3724
"	Bavaria	2.1033 "	2.0391 "	18.5280
"	Bremen	2.1019 "	2.0377 "	18.5156
"	Prague	2.6562 "	2.5751 "	23.3985
"	Prussia	1.5597 "	1.5121 "	13.7394
"	Saxony	2.9485 "	2.8584 "	25.9733
"	Würtemberg	0.6284 "	0.6092 "	5.5356
Viertlein	"	0.0019 "	0.0018 "	0.0167
Wey	Great Britain	41.260 bush.	40.0000 bush.	1458.84

MEASURES.	Locality.	United States Measure.	English Measure.	Litres.
Wispel.....	Brunswick.....	34.6688 bush.	33.6101 bush.	1221.59
"	Hamburg.....	29.8811 "	28.9686 "	1052.89
"	Hanover.....	42.4447 "	41.1485 "	1495.59
"	Prussia.....	28.0746 "	27.2172 "	989.82
"	Saxony.	70.7640 "	68.4828 "	2493.45
Zuber.....	Baden.....	42.5700 "	41.2682 "	1500.00

VIII.—WEIGHTS.

In this table the value of every weight is given in English or American avoirdupois, and in metric grammes. Each value in grammes may be converted into pfunds of the German Zollverein by dividing by 500. The gramme and its derivatives are legal standards in the Argentine Confederation, Belgium, Brazil, Chili, Colombia, Ecuador, Egypt, France, Germany, Greece, Italy, Mexico, the Netherlands, Spain, and the United States. After January 1, 1876, the metric system will be the legal system in Austria.

MEASURES.	Locality.	Avoirdupois.	Grammes.
Accino	Naples	0.69 grain.	0.0447
Adarme.....	Spain.....	27.78 "	1.8001
Aguirage.....	Guinea.....	62.04 "	4.0202
Akey.....	"	20.03 "	1.2979
Anna.....	Bengal	14.04 "	0.9098
Arratel.....	Brazil	1.0119 lbs.	459.00
"	Portugal.....	1.0119 "	459.00
Arroba.....	Argentine Confed.	25.3175 "	11441.3
"	Brazil.....	32.3792 "	14687.4
"	Bolivia.....	25.3536 "	11500.4
"	Central America.	26.0750 "	11827.7
"	Mexico.....	25.3645 "	11505.4
"	Portugal.....	32.3795 "	14687.4
"	Spain.....	25.4024 "	11522.6
"	Venezuela.....	25.3595 "	11503.1
As.....	Norway.....	0.74 grain.	0.0479
Ass.....	Baden.....	0.77 "	0.0500
Bahar. *See* also candy.....	.....	.....	.....
"	Amboyna.....	597 607 lbs.	271076.
" At Bet-el-faki.....	Arabia.....	815.625 "	369970.
" " Jidda.....	"	183.008 "	87013.
" " Mocha.....	"	450.000 "	204121.
" Ordinary	Bantam	396 000 "	179627.
" For pepper.....	"	406.780 "	184517.

MEASURES.	Locality.	Avoirdupois.	Grammes.
Bahar	Batavia	610.170 lbs.	276775.
Baruay. *See* candy			
Batman	Shiraz	12.6816 "	5750.3
"	Syria	17.0022 "	7712.2
"	Tauris	6.3408 "	2876.2
"	Turkestan	276.41 "	125380.
Bazla	Zanzibar	34.226 "	15525.
Benda	Guinea	2.2689 oz.	64.3238
Benda-offa	"	1.1344 "	32.1605
Berkovetz or berkowitz	Russia	360.6764 lbs.	163608
Binh	Annam	68.8760 "	31242.
Buncal	Singapore	1.9017 oz.	53.9136
Caban. Of rice	Philippine Isles	133.000 lbs.	60329.
" " cocoa	" "	83.500 "	37876.
Cân	Annam	1.3775 "	624.838
Candil	Sumatra	423.5 "	192101.
Candy	Ahmednuggur	1577.140 "	715395.
"	Birmah	500.000 "	226801.
"	Bombay	560.000 "	254018.
"	Ceylon	500.000 "	226801.
"	Goa	495.000 "	224538.
"	Madras	500.000 "	226801.
"	Malabar	695.500 "	315481.
"	Malacca	405.000 "	183709.
"	Muscat	525.000 "	238142.
"	Mysore	485.500 "	220224.
"	Pondicherry	583.040 "	266737.
"	Surat	340.160 "	154298.
" *See* also bahar			
Cantaro	Crete	116.570 "	52886.
"	Cyprus	524.190 "	237774.
"	Egypt	98.190 "	44539.
" Old weight	Greece	112.000 "	50804.
" " "	Ionian Isles	118.800 "	53888.
"	Malta	175.000 "	79381.
" Commercial	Morocco	119.000 "	53979.
"	Roumania	123.992 "	56243.
"	Tripoli	109.714 "	49767.
"	Tunis	111.750 "	50690.
"	Turkey	124.682 "	56556.
Carato	Bologna	2.91 grains.	0.1886
Carob. *See* karob			
Catty. *See* also kan			
"	Batavia	1.3563 lbs.	615.222
"	Birmah	1.1111 "	503.993
" Commercial	Malacca	1.3500 "	612.364
" For gold and silver	"	2.0491 "	929.478
"	Siam	2.6670 "	1209.759
"	Sumatra	1.1180 "	960.723
"	Ternate	1.3017 "	590.455
Centass	Baden	77.161 grains.	5.0000
Centigramme	France, etc	0.154 "	0.0100
Centinajo or talento	Ionian Isles	100.000 lbs.	45360.3
Centnaar	Netherlands	220.460 "	100000.
Centner	Austria	123.4615 "	56002.
"	Baden	110.230 "	50000.
"	Bremen	127.4909 "	57830.

MEASURES.	Locality.	Avoirdupois.	Grammes.
Centner	Denmark	110.230 lbs.	50000.
"	Hesse-Darmstadt.	110.230 "	50000.
"	Prague	136.080 "	61726.
"	Prussia	110.230 "	50000.
"	Saxony	113.366 "	51423.
"	Sweden	93.379 "	42357.
Chattack. Bazaar	Calcutta	2.0531 oz.	58.2058
" Factory	"	1.8664 "	52.9128
Chequi	Turkey	11.3348 "	321.3438
Coffala	Mocha	48.0 grains.	3.1104
Copang	Borneo	9.60 "	0.6220
Danik	Mocha	7.86 "	0.5093
Darhem. *See* dirhem			
Decagramme	France, etc.	154.32 "	10.0000
Decigramme. (In Germany, dezigramme)	" "	1.5432 "	0.1000
Dekass, or pfennig	Baden	7.766 "	0.5000
Denaro	Genoa	17.02 "	1.1029
"	Parma	17.49 "	1.1333
"	Rome	18.17 "	1.1774
"	Turin	19.77 "	1.2811
"	Tuscany	18.19 "	1.1787
"	Ven. Lombardy	15.432 "	1.0000
Deuke	Turkey	12.397 "	0.8033
Dhan. For precious metals.	Bengal	0.56 "	0.0363
Dirhem, darhim, or drachm.	Abyssinia	40.00 "	2.5920
" " " "	Egypt	47.73 "	3.0929
" " " "	Persia. Shiraz	295.90 "	19.1744
" " " "	Tripoli	48.00 "	3.1104
" " " "	Turkey	49.59 "	3.2133
Doli	Russia	0.685 "	0.0444
Dong	Annam	60.27 "	3.9055
Drachm. Apothecaries'	England and U. S.	60.00 "	3.8880
Drachma	Greece	15.432 "	1.0000
"	Russia	57.60 "	3.7325
"	Servia	49.33 "	3.1966
Drachme	Austria	67.70 "	4.3869
"	Denmark	57.53 "	3.7279
"	Germany	57.53 "	3.7279
Dracma. *See* ochava	Spain	55.57 "	3.6009
Dramma	Naples	41.25 "	2.6730
"	Tuscany	54.59 "	3.5374
Eggeba	Guinea	330.88 "	21.4412
Ferlino	Bologna	29.11 "	1.8863
"	Modena	25.68 "	1.6641
Frachtspfund	Bremen	329.718 lbs.	149560.
Franzella	Zanzibar	35.2822 "	16004.0
Frazil	Arabia	30.0000 "	13608.1
Funte	Russia	0.9028 "	409.510
"	"	0.7899 "	358.298
Gantang	Java	13.5631 "	6152.2
Grain	England and U. S.	1.0000 grain.	0.0648
Gramme	France, etc.	15.432 "	1.0000
Gran. Apothecaries'	Austria	1.13 "	0.0732
" "	Denmark	0.96 "	0.0622
" "	Germany	0.96 "	0.0622
"	Norway	0.95 "	0.0615

MEASURES.	Locality.	Avoirdupois.	Grammes.
Gran	Russia	0.96 grain.	0.0622
"	Saxony	0.94 "	0.0609
Grano	Bologna	0.72 "	0.0466
"	Genoa	0.71 "	0.0460
"	Parma	0.73 "	0.0473
"	Rome	0.76 "	0.0492
"	Spain	0.77 "	0.0500
"	Turin	0.82 "	0.0531
"	Tuscany	0.76 "	0.0492
"	Ven. Lombardy	1.54 "	0.1000
Granotino	Turin	0.03 "	0.0019
Grao	Portugal	0.77 "	0.0500
Grosso	Ven. Lombardy	154.32 "	10.0000
Harsela. For silk	Egypt	2.7275 lbs.	1237.2
Hectogramme	France, etc	3.5273 oz.	100.0000
Heller	Brunswick	7.04 grain.	0.4562
"	Frankfort	7.62 "	0.4938
Hundred-weight	Great Britain	112.000 lbs.	50703.
"	United States	100.000 "	45360.
Kamha	Egypt	0.49 grains.	0.0317
Kan or catty	China	1.3334 lbs.	604.83
Kantar. *See* cantaro			
Karat	Turkey	3.09 grains.	0.2002
Karch	Austria	493.85 lbs.	224009.
Karob	Algeria	3.00 grains.	0.1944
Kérat	Egypt	1.99 "	0.1289
Kharrouba	Tripoli	3.00 "	0.1944
Kilogramme	France, etc	2.2046 lbs.	1000.
Kip	Malacca	40.678 "	18.451
Korrel	Netherlands	1.54 grains.	0.1000
Kotscha	Muscat	5.8333 oz.	165.3762
Lachsa	Sooloo Archipelago	66.6667 lbs.	30236.
Lana	Russia	1.2037 oz.	34.1251
Last	Austria	4938.46 lbs.	2250085.
"	Sweden	9337.9 "	4245671.
Libbra	Ancona	0.7277 "	350.53
"	Bologna	0.7984 "	362.15
" Sottile	Genoa	0.7002 "	317.61
" Grosso	"	0.7691 "	348.85
" Sottile	Ionian Isles	0.8229 "	373.27
" Grosso	" "	1.0000 "	453.603
" or rottolo	Malta	1.7500 "	794.005
"	Modena	0.7044 "	319.52
"	Naples	0.7072 "	320.79
"	Parma	0.7197 "	326.46
"	Rome	0.7477 "	339.16
"	Sicily	0.7072 "	320.79
"	Turin	0.8133 "	368.91
"	Tuscany	0.7486 "	339.56
" Metrica	Ven. Lombardy	2.2046 "	1000.00
Libra	Argentine Confed.	1.0127 "	459.36
"	Balearic Isles	0.8820 "	400.07
"	Canary Isles	1.0148 "	460.31
"	Central America	1.0430 "	473.10
"	Chili	1.0430 "	473.10
"	Madeira	1.0110 "	458.50

MEASURES.	Locality.	Avoirdupois.	Grammes.
Libra	Mexico	1.0142 lbs.	460.04
"	Peru	1.0143 "	460.09
" Apothecaries'	Portugal	0.7589 "	344.24
" "	Spain	0.7615 "	345.42
" Ordinary	"	1.0161 "	460.90
"	Uruguay	1.0143 "	460.09
Liespfund	Bremen	15.3868 "	6979.4
"	Brunswick	14.4284 "	6544.7
"	Hamburg	14.9481 "	6780.5
Lispund	Norway	18.7457 "	8503.0
Liter. *See* rotl	Abyssinia		
Litra	Roumania	11.2720 oz.	319.5634
"	Servia	11.2720 "	319.5634
Livre	Martinique	1.0792 lbs.	489.5251
"	Switzerland	1.1023 "	500.0000
" Apothecaries'	"	0.8267 "	375.0000
Lod. For gold and silver	Denmark	225.27 grains.	14.6041
" Ordinary	Norway	205.00 "	13.2841
" For gold and silver	"	203.14 "	13.1636
Lood	Netherlands	154.32 "	10.0000
Loth	Austria	270.06 "	17.5060
"	Bavaria	270.06 "	17.5000
" Of Zollverein	"	241.12 "	15.6250
"	Bremen	240.42 "	15.5806
"	Brunswick	225.44 "	14.6086
"	Frankfort	243.39 "	15.7718
"	Hamburg	233.60 "	15.1374
"	Hanover	236.10 "	15.2994
"	Hesse-Cassel	233.52 "	15.1322
"	Hesse-Darmstadt	241.12 "	15.6250
"	Lübeck	233.79 "	15.1497
"	Prussia	257.19 "	16.6666
"	Russia	197.49 "	12.7974
"	Switzerland	241.12 "	15.6250
Ly	Annam	0.60 "	0.0389
Mace	Amboyna	28.50 "	1.8468
"	Borneo	38.38 "	2.4870
"	China	60.42 "	3.9152
"	Singapore	52.00 "	3.3696
"	Sooloo Archipel	58.33 "	3.7798
Mahnd shah	Ispahan	13.6601 lbs.	6196.2
" "	Shiraz	27.3202 "	12392.4
Maleborong	Borneo	2.13 grains.	0.1380
Mane	Zanzibar	3.0071 lbs.	1364.02
Mangal. For pearls	Madras	6.00 grains.	0.3888
Marco	Argentine Confed.	8.1015 oz.	229.68
"	Portugal	8.0949 "	229.49
"	Sardinia	8.6754 "	245.85
"	Spain	8.1288 "	230.45
"	Ven. Lombardy	8.2902 "	235.03
Mark	Austria	9.8768 "	280.01
"	Bremen	8.7925 "	249.27
"	Brunswick	8.2448 "	233.74
"	Cologne	8.2491 "	233.86
"	Denmark	8.2884 "	233.56
"	Frankfort	8.9126 "	252.67
"	Hamburg	8.5431 "	242.20

MEASURES.	Locality.	Avoirdupois.	Grammes.
Mark	Hanover	8.6356 oz.	244.82
"	Lübeck	8.5499 "	242.39
"	Norway	7.4306 "	210.66
"	Prussia	8.2494 "	233.87
"	Saxony	8.2448 "	233.74
"	Würtemberg	8.2511 "	233.855
Mascal	Persia	73.98 grains.	4.7939
Maund	Abyssinia	21.9429 lbs.	9952.
"	Anjar	26.2300 "	10898.
" Ad Bet-el-faki	Arabia	2.0390 "	924.89
" " Jidda	"	1.8301 "	830.13
" " Mocha	"	3.0000 "	1360.8
"	Aurungabad	75.8667 "	34418.
" Factory	Bengal	74.6667 "	33869.
" Bazaar	"	82.1333 "	37256.
"	Bombay	28.0000 "	12701.
"	Deccan	79.7800 "	36188.
"	Goa	24.7500 "	11227.
"	Gujerat	39.7396 "	18026.
"	Madras	25.0000 "	11340.
"	Muscat	8.7500 "	3969.
"	Pondicherry	25.9000 "	11748.
"	Sumatra	77.0000 "	34927.
Media-tabla	Guinea	31.02 grains.	2.0101
Metical, or mitkal	Algeria	72.06 "	4.6695
" "	Egypt	47.73 "	3.0929
" "	Tripoli	73.60 "	4.7692
" "	Tunis	59.70 "	3.8686
Millier	France, etc	2204.6 lbs.	1000000.
Milligramme	" "	0.0154 grains.	0.00100
Mina	Greece	2.2046 lbs.	1000.
Miscal	Mocha	72.00 grains.	4.6656
Mocha	Abyssinia	1.0971 oz.	31.1020
Monme	Japan	27.007 grains.	1.7502
Moosa	Cyprus	112.0000 lbs.	50703.
Münzpfund	Austria	1.1023 "	500.0000
Myriagramme	France, etc	22.046 "	10000.
Nanki	Madagascar	10.00 grains.	0.6480
Nely	Bengal	0.28 "	0.0181
Nen	Annam	13.7800 oz.	390.66
Occa or occha. *See* oka			
Ochava or dracma	Spain	55.57 grains.	3.6009
Oka, or oke	Crete	2.6402 lbs.	1197.6
"	Cyprus	2.7957 "	1268.1
"	Egypt	2.7275 "	1237.2
"	Greece	3.3714 "	1529.3
"	Ionian Islands	2.6998 "	1224.6
"	Roumania	2.8188 "	1278.6
"	Servia	2.8188 "	1278.6
"	Tripoli	2.7353 "	1240.7
"	Turkey	2.8837 "	1285.4
Ortchen	Hanover	14.86 grains.	0.9629
Onça	Portugal	1.0119 oz.	28.6873
Once	Russia	1.0532 "	29.8582
"	Switzerland	1.1091 "	31.2500
Oncia	Bologna	1.0645 "	30.1786
"	Genoa	0.9836 "	26.4676

MEASURES.	Locality.	Avoirdupois.	Grammes.
Oncia	Modena	0.9392 oz.	26.6273
"	Naples	0.9429 "	26.7312
"	Parma	0.9596 "	27.2047
"	Rome	0.9969 "	28.0621
"	Sicily	0.9429 "	26.7312
"	Turin	1.0844 "	30.7427
"	Tuscany	0.9982 "	28.2990
"	Ven. Lombardy	3.5273 "	100.0000
Ons	Netherlands	3.5273 "	100.0000
Onza	Spain	1.0161 "	28.8066
Ootan. For camphor	Sumatra	4.0000 lbs.	1814.4
Ort	Bremen	15.03 grains.	0.9739
" Ordinary	Denmark	77.16 "	5.0000
" For gold and silver	"	14.08 "	0.9124
"	Sweden	65.35 "	4.2347
Ottavo	Bologna	58.22 "	3.7727
"	Turin	59.30 "	3.8427
Ounce. Avoirdupois	England and U. S.	1.0000 oz.	28.3502
" Troy and apothecaries'	" " "	1.0971 "	31.1028
Outava	Brazil	57.17 grains.	3.7046
"	Portugal	55.34 "	3.5861
Packen	Russia	1082.03 lbs.	490810.
Pagoda	Madras	54.38 grains.	3.5238
Pahaw	Borneo	153.50 "	9.9469
Pecul	"	135.6354 lbs.	61524.
"	Celebes	135.6400 "	61526.
" or tam	China	133.3334 "	60480.
"	Java	135.6312 "	61522.
"	Malacca	135.0000 "	61236.
"	Philippine Isles	139.4500 "	63254.
"	Siam	133.35 "	60488.
"	Sumatra	133.33 "	60477.
Pennyweight	England and U. S.	24.00 grains.	1.5552
Pfennig	Austria	16.88 "	1.0938
"	Brunswick	14.09 "	0.9140
"	Frankfort	15.21 "	0.9856
"	Hamburg	14.60 "	0.9461
"	Lübeck	14.61 "	0.9526
"	Saxony	14.18 "	0.9189
Pfund	Austria	1.2346 lbs.	560.00
" Apothecaries'	"	0.9284 "	421.12
"	Baden	1.1023 "	500.00
"	Bavaria	1.1023 "	500.00
" Commercial	"	1.2346 "	560.00
"	Bremen	1.0991 "	498.54
"	Brunswick	1.0306 "	467.48
"	Frankfort	1.1141 "	505.34
"	German Empire	1.1023 "	500.00
" Apothecaries'	" "	0.7889 "	357.83
"	Hamburg	1.0679 "	484.40
"	Hanover	1.0794 "	489.64
"	Hesse-Cassel	1.0675 "	484.22
"	Hesse-Darmstadt	1.1023 "	500.00
"	Lübeck	1.0687 "	484.77
"	Prussia	1.1023 "	500.00
"	Saxony	1.0306 "	467.48

MEASURES.	Locality.	Avoirdupois.	Grammes.
Pfund	Würtemberg.	1.1023 lbs.	500.00
Pfundschwer	Bremen.	329.57 "	149493.
Phan	Annam	6.03 grains.	0.3907
Pice	Bombay	163.33 "	10.5838
Piso or uzan	Guinea	124.08 "	8.0404
Pollam	Madras	1.2250 oz.	34.7289
Pond	Netherlands	2.2046 lbs.	1000.00
" Apothecaries'	"	0.8267 "	375.00
Pood or pud	Russia	36.0676 "	16360.
Pound. Avoirdupois	England and U. S.	1.0000 "	453.6029
" Troy and apothecaries'	" " "	0.8229 "	373.2674
Pund	Denmark	1.1023 "	500.00
" Apothecaries'	"	0.78897 "	357.89
" Apothecaries'	Norway	0.7856 "	356.35
" *See* also skälpund	"	0.9373 "	425.16
" " "	Sweden	0.9338 "	423.57
Punko	Bengal	0.14 grains.	0.0091
Quan	Annam	688.76 lbs.	312221.
Quarter	Great Britain	28.0000 "	12700.0
"	United States	25.0000 "	11340.0
Quentchen	Austria	67.51 grains.	4.3750
" Legal	Bavaria	60.28 "	3.9062
" Commercial	"	67.51 "	4.3750
"	Bremen	60.10 "	3.8945
"	Brunswick	56.36 "	3.6521
"	Frankfort	60.85 "	3.9476
"	Hamburg	58.40 "	3.7843
"	Hanover	59.02 "	3.8045
"	Hesse-Cassel	58.33 "	3.7830
"	Hesse-Darmstadt	60.28 "	3.9062
"	Lübeck	58.45 "	3.7876
"	Prussia	60.28 "	3.9062
Quentlein	Saxony	56.70 "	3.6093
Quilate. For gems	Brazil	3.075 "	0.1996
Quint	Denmark	1.7636 oz.	50.0000
Quintal	Argentine Confed.	101.270 lbs.	45936.
"	Bolivia	101.418 "	46000.
"	Central America	104.300 "	47310.
"	France	220.46 "	100000.
"	Mexico	101.418 "	46008.
"	Peru	101.429 "	46008.
"	Portugal	129.518 "	58749.
"	Spain	101.609 "	46089.
"	Switzerland	110.23 "	50000.
"	Venezuela	101.438 "	46012.
Quintin	Denmark	56.32 grains.	3.6496
" Ordinary	Norway	51.25 "	3.3210
" For gold and silver	"	50.79 "	3.2911
Quinto	Guinea	93.06 "	6.0303
Rattel	Persia	1.0568 lbs.	479.36
Richtspfennig	Hesse-Darmstadt.	15.08 grains.	0.9765
Rik	Teheran	17.075 lbs.	7745.2
Rjoo	Japan	116.125 grains.	7.5247
Rotl or rottolo	Abyssinia	0.6857 lbs.	311.03
" attari, for spices	Algeria	1.2039 "	546.09
" feuddi, gold and silver.	"	1.0967 "	497.46

MEASURES.	Locality.	Avoirdupois.	Grammes.
Rotl gheddari, for fruits...	Algeria.....	1.3545 lbs.	614.40
" khebir.....	"	2.0317 "	921.58
" At Bet-el-faki.....	Arabia.....	1.0195 "	462.45
" " Jidda.....	"	0.3660 "	166.02
"	Egypt.....	0.9819 "	445.41
" Of commerce...	Morocco.....	1.19 "	539.79
" " the markets. ...	"	1.70 "	771.12
"	Tripoli.....	1.0971 "	497.64
" sucky, for meat, etc...	Tunis.....	1.2532 "	568.45
" ghredari, for vegetables	"	1.4098 "	639.49
Rotolo.....	Aleppo.....	5.0643 "	2297.17
"	Crete.....	1.1657 "	528.76
"	Cyprus.....	5.2419 "	2377.73
"	Genoa.....	1.0503 "	476.42
"	Naples.....	1.9645 "	891.10
" Grosso	Sicily.....	1.9250 "	872.18
" Sottile.....	"	1.7500 "	793.80
"	Smyrna..	1.2656 "	574.08
"	Zanzibar....	0.9801 "	444.57
Rubbio.....	Parma.....	17.9925 "	8163.5
"	Ven. Lombardy..	22.046 "	10000.00
Ruttee. For pearls.....	Bengal.....	2.825 grains.	0.1831
Saum.....	Austria.....	339.536 lbs.	154014.
" For steel.....	"	308.669 "	140013.
Schiffslast.....	"	2469.23 "	1120043.
Schiffspfund.....	Bremen.....	318.727 "	144574.
"	Brunswick.....	288.568 "	130894.
"	Hamburg.....	299.008 "	135630.
Scrupel.....	Austria.....	22.88 grains.	1.4826
"	Germany.....	19.18 "	1.2429
"	Norway.....	19.02 "	1.2325
Scruple.....	England and U. S.	20.00 "	1.2960
Scrupule.....	Russia.....	19.20 "	1.2442
Scrupulo.....	Portugal.....	18.39 "	1.1917
Seer.....	Bengal.....	1.8667 lbs.	846.74
"	Bombay.....	11.2000 oz.	317.5222
"	Madras.....	10.0000 "	283.502
.....	Turkestan.....	34.5512 lbs.	15672.
Seron.....	Guinea.....	186.12 grains.	12.0606
Shik.....	China..... ...	160.00 lbs.	72576.
Sicca. Factory.....	Bengal	163.32 grains.	10.5832
" Bazaar.....	"	179.64 "	11.6407
Skålpund.....	Norway	0.9373 lbs.	425.16
"	Sweden.....	0.9338 "	423.57
Skippund.....	Norway	374.914 "	170061.
Sompi.....	Madagascar.....	60.00 grains.	3.8880
Stein.....	Austria.....	24.694 lbs.	11201.2
"	Baden.....	11.0230 "	5000.
Stone.....	Great Britain....	14.0000 "	6350.4
Ta.....	Annam....	137.752 "	62484.
Tael.....	Amboyna.....	1.0018 oz.	28.4010
"	Bantam.....	2.4176 "	48.5400
"	Batavia.....	1.3552 "	37.8529
"	Borneo.....	1.4034 "	39.8280
"	China.....	1.3334 "	37.8019
"	Cochin China....	1.3503 "	38.2810
"	Siam.....	2.1336 "	60.4874

WEIGHTS.	Locality.	Avoirdupois.	Grammes.
Tael	Sooloo Archipel..	1.3328 oz.	37.7849
Talanton	Greece	3.3070 lbs.	1500.00
Talento or centinajo	Ionian Islands...	100.0000 "	45360.
Tam. *See* pecul	China..	133.3334 "	60480.
Tampang. For tin	Malacca	1.356 "	615.28
Tank	Bombay	68.40 grains.	4.4323
Tercio	Mexico	162.269 lbs.	73605.
Tica	Borneo	6.40 grains.	0.4147
Tical	Birmah	233.33 "	15.1201
"	Siam	233.33 "	15.1201
Timbang. For grain	Java	677.963 lbs.	307524.
Tomin	Spain	9.26 grains.	0.6001
Ton	Great Britain....	2240.00 lbs.	1016064.
"	United States....	2000.00 "	907200.
Tonelada	Argentine Confed.	2025.40 "	918721.
"	Portugal	1748.493 "	793116.
"	Spain	2032.194 "	921803.
Tonne	German Empire..	2204.6 "	1000000.
Tonneau	France	2204.6 "	1000000.
Trapeso	Naples	13.75 grains.	0.8910
Uckia	Tripoli	1.0971 oz.	31.0098
"	Tunis	1.1175 "	31.6811
Untz. Ordinary	Norway	0.9373 "	26.5724
" Apothecaries'	"	1.0477 "	29.7023
" For gold and silver.	"	0.9289 "	26.3343
Unze. Ordinary	Austria	1.2346 "	35.0000
" Apothecaries'	"	1.2379 "	35.0944
"	Bavaria	1.2346 "	35.0000
"	Bremen	1.0991 "	31.1595
" Apothecaries'	Denmark	1.0519 "	29.8214
"	Frankfort	1.1141 "	31.5847
" Apothecaries'	Germany	1.0519 "	29.8214
"	Hamburg	1.0679 "	30.2820
"	Hanover	1.0794 "	30.6010
"	Hesse-Cassel	1.0675 "	30.2636
"	Lübeck	1.0687 "	30.2976
"	Saxony	1.0306 "	29.2175
Uzan. *See* piso	Guinea	248.16 grains.	16.0809
Vakia	Arabia	1.2000 oz.	34.0200
Val. For gold, gems, etc..	Delhi	5.63 grains.	0.3648
Vari	Madagascar	30.00 "	1.9440
Vierling, or vierding	Austria	4.9334 oz.	140.006
"	Bavaria	4.4091 "	125.000
Vis	Birmah	3.3333 lbs.	1512.0
" or visay	Madras	3.1250 "	1417.5
Wakea	Abyssinia	400.00 grains.	25.9202
"	Algeria	12.0395 oz.	341.3198
Wakega. Commercial	Mocha	1.0000 lb.	453.60
" For gold & silver	"	0.6857 "	311.03
Wigtje	Netherlands	15.432 grains.	1.0000
Yen	Annam	13.7752 lbs.	6248.4
Yin	China	2.6667 "	1209.6
Zehnling	Baden	1.7636 oz.	50.0000
Zent	Prussia	25.72 grains.	1.6666
Zentigramme	German Empire..	0.15 "	0.1000
Zentner	" "	110.23 lbs.	50000.00
Zollcentner	Germany	110.23 "	50000.00

WEIGHTS.	Locality.	Avoirdupois.	Grammes.
Zollpfund	Germany	1.1023 lbs.	500.0000
Zollstein	"	220.46 "	100000.00
Zolotnik	Russia	65.83 grains.	4.2658

IX.—MONEY.

In the following table only the more important monetary standards are given, the minor subdivisions being, with few exceptions, omitted. For each unit four values are given: First, its value in American currency (of the United States); which, expressed in dollars, represents also its value in dollars of Canada and Liberia, pesos of Paraguay, and pesos fuerte of the Argentine Confederation. Second, its value in French francs, to which are equivalent the francs of Belgium and Switzerland, pesetas of Spain, lire of Italy, drachmes of Greece, and piastres or lei of Roumania. By dividing any value in francs by five, the corresponding value may be obtained in pesos of Bolivia, Central America, Chili, Colombia, and Ecuador, and in sols of Peru. Third, its value in English sterling. Fourth, its value in German marks:

MONEY.	Locality.	Dollars.	Francs.	Sterling.	Marks.
				£. s. d.	
Crown. *See* krone..					
Dollar	Canada	1.0000	5.1813	4 1⅓	4.1450
" *See* tallari...	Egypt	.....	.....	.....	.....
"	Hong-Kong	1.0400	5.3885	4 3⅓	4.3108
"	Liberia	1.0000	5.1813	4 1⅓	4.1450
" *See* peso....	Mexico	.....	.....	.....	.....
" " "	South America	.....	.....	.....	.....
"	United States	1.0000	5.1813	4 1⅓	4.1450
Drachme	Greece	0.1930	1.0000	9⅓	0.8000
Escudo.....	Spain	0.5049	2.6160	2 1	2.0928
Florin. *See* guilder.	Netherlands	.....	.....	.....	.....
" " gulden..	Germany	.....	.....	.....	.....
Franc	Belgium	0.1930	1.0000	9⅓	0.8000
"	France	0.1930	1.0000	9⅓	0.8000
"	Switzerland	0.1930	1.0000	9⅓	0.8000
Gersh.....	Tripoli	0.1046	0.5419	5	0.4335
Guilder or florin....	Netherlands	0.4084	2.1161	1 8¼	1.6929
Gulden " "	Austria	0.4803	2.4886	1 11¾	1.9909

MONEY.	Locality.	Dollars.	Francs.	Sterling. £.	s.	d.	Marks.
Gulden or florin.....	Germany.....	0.4117	2.1332		1	8⅝	1.7066
Krone. Vereins....	"	6.6462	34.4363	1	7	4½	27.6917
"	Norway & Swed'n	0 2680	1.3886		1	1⅛	1.1109
Kwan.....	Annam.....	0.6698	3.4705		2	9	2.7764
Lei or piastre.....	Roumania	0.1930	1.0000			9⅛	0.8000
Lira.....	Italy	0.1930	1.0000			9⅛	0.8000
Mark.....	Germany.....	0.2401	1.2500			11⅞	1.0000
Mark-banco.....	Hamburg.....	0.3642	1.8922		1	6	1.5138
Milreis.....	Brazil	0.5456	2.8269		2	2⅝	2.2615
"	Portugal.....	1.0847	5.6202		4	5⅛	4.4962
Moon pagoda.....	Pondicherry.....	1.6015	8.2979		6	7	6.6383
Mohur (15 rupees)..	India.....	7.1050	36.8135	1	9	2⅛	29.4508
Patacon.....	Uruguay	0.9498	4.9212		3	11	3.9370
Peseta.....	Spain.....	0.1930	1.0000			9⅛	0.8000
Peso or dollar.....	Argentine Confed.	1.0000	5.1813		4	1⅛	4.1450
" " "	Bolivia.....	0.9650	5.0000		3	11⅝	4.0000
" " "	Central America.	0.9650	5.0000		3	11⅝	4.0000
" " "	Chili.....	0.9650	5.0000		3	11⅝	4.0000
" " "	Colombia.....	0.9650	5.0000		3	11⅝	4.0000
" " "	Ecuador.....	0.9650	5.0000		3	11⅝	4.0000
" " "	Mexico	1.0567	5.4751		4	4⅜	4.3801
" " "	Paraguay.....	1.0000	5.1813		4	1⅛	4.1450
" " "	Venezuela	0.7836	4.0601		3	2⅛	3.2481
Piastre.....	Egypt.....	0.0495	0.2565			2⅛	0.2052
"	Mocha.....	0.8337	4.3197		3	5	3.4558
" or lei.....	Roumania.....	0.1930	1.0000			9⅛	0.8000
"	Servia.....	0.0794	0.4114			4	0.3291
"	Turkey.....	0.0432	0.2238			2¼	0.1790
"	Tunis.....	0.1286	0.6663			6⅞	0.5330
Pound sterling.....	Great Britain....	4.8666	25.2158	20			20.1726
Rigsdaler.....	Denmark.....	0.5463	2.8306		2	8	2.2645
Rijksdaaler.....	Netherlands.....	1.0212	5.2912		4	2⅛	4.2329
Riksdaler.....	Norway	1.0929	5.6627		4	6	5.6626
" silfver...	Sweden.....	1.1023	5.7114		4	6⅛	4.5691
" ryks mint	"	0.2756	1.4279		1	1⅛	1.1423
Ruble or rouble.....	Russia.....	0.7779	4.0306		3	2⅛	3.2645
Rupee.....	India.....	0.4622	2.3948		1	10¾	1.9160
Shilling.....	Great Britain....	0.2433	1.2606		1		1.0085
Sol.....	Peru	0.9650	5.0000		3	11⅝	4.0000
Specie daler.....	Denmark.....	1.0926	5.6611		4	6	4 5289
Star pagoda.....	Madras	1.9102	9.8974		7	10½	7.9179
Tael.....	China.....	1.6100	8.3419		6	8	6.6735
Tallari or dollar.....	Egypt.....	1.0039	5.2015		4	1⅜	4.1612
Thaler. Vereins....	Austria.....	0.7204	3.7500		2	11⅛	3.0000
" Old rix.....	Bremen.....	0.7912	4.0995		3	3	4.0796
" Vereins....	Germany.....	0.7204	3.7500		2	11⅛	3.0000
Tilla.....	Turkestan.....	2.7155	14.0700		11	1⅛	11.2560
Tomaun.....	Persia.....	2.2437	11.6254		9	2⅝	9.3003
Yen.....	Japan.....	1.0400	5.3885		4	3¼	4.3108

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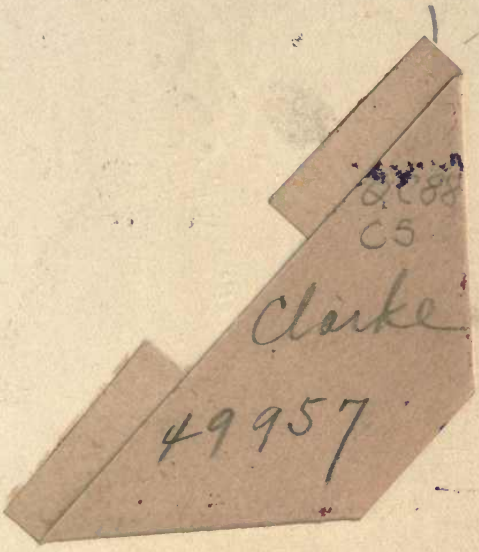
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